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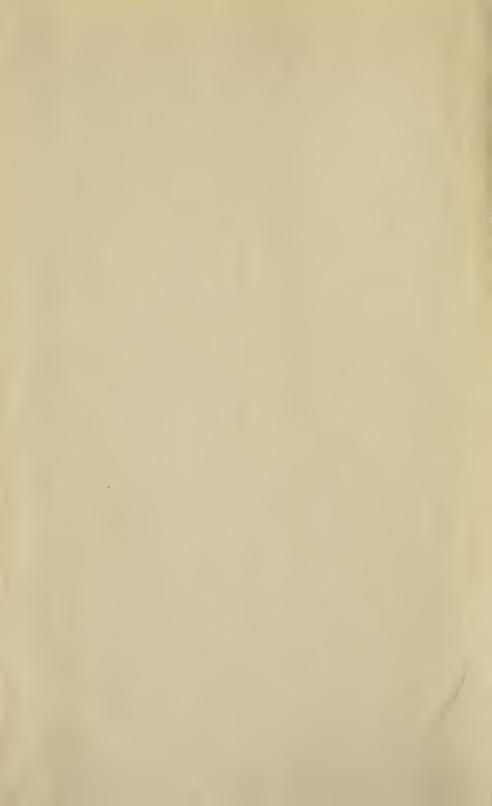


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This Bulletin will be sent free to any citizen of the State upon request.

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VOL. XLV

JANUARY, 1930

NO. 1



The midwife class of Person County. These women have been taking a course of instruction provided by the county health department, sponsored by Miss Ruth McCollum, the county nurse. It is a creditable looking group. They are putting into effect the practical idea of improving the status of all midwives as long as there remains a single woman needing their services.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Catarrh Care of the Baby Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes

Fly Placards
German Measles
Hookworm Disease
Infantile Paralysis
Indigestion
Influenza
Malaria
Measles
Pellagra
Public Health Laws
Prenatal Care

Sanitary Privies
Scarlet Fever
Scarlet Fever
Smallpox
Teeth
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Veneral Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine
monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who
Want Better Babies
Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age)

Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months: 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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VOL. XLV

JANUARY, 1930

NO. 1

NORTH CAROLINA HEALTH PROSPECTUS FOR 1930

Facing a new year is an adventure for every living human being from the infant in its crib to the individual who has marked off three score and ten years. For many of the infants, too many of them, the journey will be perilous. For many of the aged it will mean embarkation on the "Third Puzzle" of human existence. Accidents and untimely deaths, most of which are preventable, will take heavy toll among the intervening ages. The same history is recorded year after year.

It is the business of a health department to make the traveling of the infants less hazardous, to reduce the preventable toll taken from those of active age, and to defer the embarkation of those of advanced years as long as possible.

The practical question is, how may these things be done? The equally practical answer is, by efficiency, honesty and industry on the part of health department personnel, county, city, and state, in vigorously teaching the people how to apply the scientific principles of disease and accident prevention.

We herewith set forth some of the things that might be done.

Every prospective bride and groom might be taught the dangers of venereal disease with the disastrous consequences which so often follow such infection. Every prospective mother should receive expert care and advice during the entire pre-natal period. She should have the proper kind of food in adequate quantity. Any abnormal condition manifesting itself should have immediate medical at-

tention. During the birth process everv needful attention should be available. Thus the maternal dangers may be largely eliminated. The infant then. given a healthy heritage free from venereal infection, may have at least an even start. Every infant born should have right from its first hour the inalienable right of nourishment from its mother's breast, unless a competent physician certifies that breast feeding would be dangerous for the mother and disastrous for the infant. Soap is cheap and water, fresh air and sunlight in North Carolina is practically unlimited the year round. The baby should, therefore, have a clean bed, regardless of rags or poverty (the rags can be clean ones), mother's milk, sunlight and clean air. The male relative with pipe or cigar, or the mother with cigarette, should be equally barred from the baby's presence as the visitor with a cold. Give the baby air free from the germs of respiratory infection, the irritating effects of nicotine loaded smoke, good breast milk, a clean bed, good heritage from healthy parents, let it alone and the chances are better than even the baby will do the rest for the first eight or nine months of life. Careful attention to the establishment of health habits with assurance of right kind of food, frequent inspection by the family physician and dentist will take care of the pre-school period and ensure the presentation of a healthy young animal to the school at the ripe and experienced age of six. These first six years are the important ones. Then is the period when the parents should know

the water is pure, the milk safe and the food of the right kind, adequate and properly prepared. Two of the most important things to do during the first year is to see that the infant successfully vaccinated smallpox and that it has three adequate doses of a fresh product toxin-antitoxin properly administered guarantee against diphtheria. Measles, whooping cough, and scarlet fever should be guarded against with all possible care. Six years old and healthy when school troubles means power to win if the teacher is intelligent. There are so many aids to good health now available for school children almost all over the State, that no pupil's health should be jeopardized during these years. Nevertheless many thousands of them have their health seriously impaired many ways which could be avoided. But we may take heart here for the teachers are learning. It is the solemn duty of every health officer to help teach them, and none the less the obligation of every practicing physician to do the same thing. Shorter school hours for younger children, all those under twelve, and rigid supervision of school cafeterias may be regarded as the two most imperative demands for better health safeguards for children. It ought not to be necessary to say that if any child is so unfortunate as to be admitted to school this year before receiving a successful vaccination against smallpox and diphtheria this important deficiency should be remedied during the first thirty days of school.

In all the foregoing the one responsible individual who is paid a salary from public moneys to do these things is the local health officer. It makes no

difference whether he is a full time official or a part time one, the obligation is equally binding. It is no use to say the fault is the parents, or the practicing physician's when failure to invoke protection is present. The health officer must secure the cooperation of parent and family physician. Details and methods by which things may be done are unimportant. Getting them done is the important point. Plans and programs should be made to fit the local needs. But the principles are fundamental and State-wide.

For the general population attention should be given to a more plentiful supply of fruits and vegetables and an increase in the consumption of dairy products, poultry, eggs, meat, and fish, by people who need to guard against the deficiency diseases. Pure water, whether it be for village or city dweller or on the farms, should be made available. Better safeguards to assure clean and safe milk. Adequate screening of all houses, the extension sewage facilities and sanitary privies where needed are among some of the things to be looked after in our 1930 health prospectus.

More humane and sympathetic care for the aged and the "down and out;" the better safeguarding of the health of working people in all kinds of industry and agriculture are among our biggest needs. For the adult individual a health examination, a really truly health examination, not a pulse feeling and tongue inspecting enterprise, would if included in the year's program add much to the happiness of all such wise folk as well as possibly adding a little something to the span of life.

May your New Year be what you try to make it.

PRACTICAL HEALTH TEACHING IN THE WILKINSON SCHOOL OF ROCKY MOUNT

Early in October the teachers of the Wilkinson school of Rocky Mount, North Carolina, wrote to the State

Board of Health explaining a plan they had for the practical teaching of health matters in the school this year. They informed us that they had about three hundred and twenty-five pupils in this particular school.

The plan that they proposed to put into effect is one that any wide-awake school of the State can also utilize. Briefly speaking, they propose to take up one phase of health teaching each month and study that exhaustively. They selected as their subject for the month of October the care of the teeth. They asked us to supply them with literature in the form of a short pamphlet on the care of the teeth, sufficient to supply each one of the pupils with a copy. It so happened that we have been distributing for ten years all throughout North Carolina a carefully written special pamphlet on the care of the teeth. This pamphlet has two cuts, one a drawing of the temporary teeth and one that of the permanent teeth. The two are placed on the same page. Each tooth of each set has the proper name and the approximate date of eruption.

The teachers of the Rocky Mount school proceeded to examine each child, writing his or her name on the pamphlet to begin with. Whenever they found a child who had a particular tooth corresponding to the tooth on the plate, either temporary or permanent, which was decayed, they marked this particular tooth "decayed" or "needed dental attention." Each child was then asked to take this pamphlet home and to show the parents the situation that the teacher had found.

This is certainly beginning at the beginning and is one of the most effective methods of teaching practical care of the teeth we have ever seen. The method assures concentrated interest on the part of the parent at a time when it will probably do more good than it could ever do again. The information carried in the pamphlet is sufficient to explain to the parent the importance of taking action immediately. No dentist in the world could criticise this procedure. The examination was not a dental examination, and

if a tooth had a decay in it big enough for a teacher to see, it is a self-evident proposition that the dental services were needed; and, after all, the responsibility of health departments and teachers is to get children who need dental or medical care into the hands of capable dentists and physicians. This procedure on the part of the Rocky Mount teachers strikes us as being the finest method yet devised to do that particular thing.

To go a little farther along with the Rocky Mount program, another month, after they settle the teeth question, is to be devoted to the question of a study of the prevalence, dangers, and prevention of diphtheria. Here again we are able to provide them with literature which is to the point, sufficient for each child and its parents to have. In this way every parent who is patronizing the Wilkinson school in Rocky Mount will have directly called to his attention the fact that diphtheria may be easily prevented through the administration of toxin-antitoxin to any young children in their families. If the parents do their part and act on the suggestions which will be brought directly to them, there should not be a single case of diphtheria developing in the Wilkinson school of Rocky Mount when the fall session of 1930 opens. This will give ample time for the immunization through the winter and spring of any children in homes patronizing that school for the immunization to take full effect before the school opens next September.

And another item of vast importance to the health of the school children is the question of foods. The teachers propose to take one month for the study of the particular kind of food, the quantities, and so on that school children should have. These are only items illustrative of the fine and comprehensive program these teachers are carrying through.

We take pleasure in departing from our usual custom in which we are treating all matters these days discussed in the Bulletin in an impersonal manner, by mentioning the names of the two teachers who have initiated this program. Communication to the State Board of Health was made by Miss Charlie Westbrook, one of the teachers in the Wilkinson school, and

Miss Bessie McDearman, principal of that school. We hope that other teachers, when engaged in their schools, will follow the example of these wideawake teachers in this particular Rocky Mount school. The field is unlimited and the need is great for just such practical teaching.

RECALLS THE DAYS OF EMBALMED BEEF AND TYPHOID FEVER

Thirty-two years ago this month the battleship Maine was blown up in Havanna Harbor, and very soon thereafter the country was at war with Spain. Some few weeks ago the Monroe Journal published a rather poignant little story from a Monroe citizen who is a veteran of that war. The story recalls to mind so graphically the conditions in this country, and in the army where typhoid fever killed many more soldiers than Spanish bullets, that we herewith publish it in full. To a present-day health officer in North Carolina it will read like a story from some ancient and musty history. However, there are many of us who can remember only too well the conditions that existed in the civilian population in North Carolina just as well as obtained in the army.

This man speaks from personal knowledge. He was a victim. The story has gone the round many times of a pompous major general of one of the camps walking up and tearing from a polluted well a notice from the medical department warning the soldiers not to drink the water from that particular well. This old incarnation of political authority, and ignorant of things outside of his particular technical training, proceeded to drink of the water and to remark that all this medical palaver was foolishness. At the time hundreds of his soldiers were sick from typhoid fever, and many of them were dying every day. We have certainly traveled some distance since that day. Read the story that this soldier tells, and take heart that in some things the world is not as bad as it was thirty-two years ago.

"When Mr. John Holloway put on his uniform of a soldier of the Spanish-American War, people said, "Hello, Mr. Holloway, I didn't know you were a Boy Scout.'

"That riled John, riled him to think that the war in which he had been a soldier and came very near losing his life, could be totally forgotten by the older people and wholly unknown to the young.

"But that is about the truth of it. And the government takes the same attitude, says Mr. Holloway. It does just about half as much for a veteran of the Spanish-American War as it does for one of the World War for exactly the same disability. And though it paid him only fifteen dollars and sixty cents for soldiering, it mustered him out without any compensation adjustment at all.

"Dewey captured the Spanish fleet in Manila bay on May first, 1898, and Schley smacked the Cevera fleet on July fourth. At that time the American soldiers, every last one of them volunteers, were being prepared to land in Cuba, but a lot of them never got there. They were already dead or dying of typhoid fever or starving on embalmed beef in the concentration camps. John Holloway was one who was laid up with typhoid fever and his leg was swollen as big as his body when his regiment embarked for Cuba.

"There are a good many more Spanish-American War veterans around here and there and no doubt they feel about like John of the hardships of that war and the scant attention they now receive, especially as John says, since what they underwent caused the revolution that swept away the menace of embalmed beef, cheating contractors and such like and started the war against typhoid and made army camps at last free from such diseases."

VITAMIN B AND PELLAGRA

In a letter to the Editor of the Bulletin sometime ago a physician friend remarked that he could not see why pellagra should be regarded as a deficiency disease in view of the fact that the pellagra preventing principle in food known as vitamin B is the most widely distributed vitamin in nature, and so that practically the diet served on all tables in the homes of the people of this State therefore had an abundance of vitamin B, and that they could not help eating a considerable amount of food containing this vitamin.

The fact that vitamin B is present in the leafy vegetables such as lettuce, cabbage, spinach, turnips, in liver, kidneys, tomatoes, beans, peas, potatoes, eggs, milk, in addition to the large amount found in yeast and the basic foods of every family, cereals, would seem to afford a sufficiency of this necessary element. It is, of course, true that an abundance of this vitamin is available, provided we eat it.

We have just called cereals the basic food of every family. This is true, because, in North Carolina at least, corn bread, white store bread, or biscuit made from white flour, composes the bread diet for ninety-nine per cent or more of the people. In a thorough-going study of this point the late Dr. Edward J. Wood made a special trip to some of the large flour mills in the Central West in order to see the process employed in making flour, a large quantity of which was shipped and is shipped to this State for consumption. He made the same investigation concerning the manufacture of the commercial corn meal handled in large quantities by the grocery stores of this section also. He learned that the germ of the wheat, and of the corn, was removed in the milling process, because this portion of the grain, which contains the vitamin B, if retained, then the flour or the corn meal was many times more subject to mold and spoilation in shipping, and therefore to commercial loss.

People who eat the native whole wheat bread from wheat made in this section, or at least milled in this section, and which contains all of the



This little Youngsville girl weighed only two pounds when one week old. She lay on a pillow in a bassinet with hot water bottles around her for the first three months. During this time she was fed lactic acid milk sweetened with corn syrup, and administered with a medicine dropper. She is a fine example of what may be done with patient and intelligent care, including parental, nurse and medical.

wheat kernel, including the germ, get the vitamin B in proper proportion. In the same way the many thousand families in the State who embrace the opportunity of getting their corn meal, from which they make their bread, from local grist mills, especially from local mills in which the North Carolina corn is utilized fresh from the barns and fields of the local farmers, also get vitamin B in their corn bread, although in smaller proportions than in the whole wheat bread. Dr. Wood therefore held that the basic cause which made pellagra possible was that the people who had been depending upon a diet rich in the germs of wheat and corn in their bread, when deprived of this through the commercial products utilized in recent years, failed to get enough of the pellagra preventing principles by eating it in other foods, sufficient to make up for the deficiency.

We reiterate here the doctrine of Goldberger and Wood, that it is not only necessary to have an adequate diet on the table containing an abundance of vitamin B, called by Goldberger the pellagra preventing principle, but it is essential that this diet be consumed by the person who would avoid pellagra or other deficiency diseases of like character.

PREVENTING UNNECESSARY NOISES

Some of the health departments in the various cities of the country are very much concerned over the question of control of unnecessary noise. The city of London has had various commissions at work making surveys in their thorough-going style as a preliminary to city ordinances drastically extending control in order to prevent these nuisances. In this State the city of Greensboro raises a big fuss about the blowing of train whistles and the exhaust racket kept up during the night by a surplus of motor cycles. In some of the cities of the North street cars are blamed for a great deal of the noise, the city of Dayton, Ohio, in its Health Bulletin declaring that there had been no improvement from a noise standpoint in the operation of street cars of city in a third of a century.

Nearly all the cities and towns in our State find the unnecessary blowing of automobile horns nothing short of an unmitigated nuisance. The vibration caused by heavily loaded trucks running at rapid speed on the streets at all hours of the night is another cause for complaint. For the most part the latter are engaged in the work necessary to be done for the welfare of the people, and nothing we

know could be done to prevent it except better training of the drivers as to how to reduce the racket to a minimum. In the case of blowing automobile horns, in our opinion about one toot every six months for the average car is sufficient. The fact is that the manufacturers ought to be prohibited by law from equipping cars horns. If this nuisance were drastically abated in the foregoing manner, and an ordinance strictly enforced, requiring all drivers to keep well to the right side of the road, there would not be any possible excuse for a horn on an automobile. Some critic might probably say that it would still be necessary to warn pedestrians, but the fact is that a few sharp blasts from the automobile horn when a pedestrian is crossing the street only tends to confuse him and make bad matters worse. The pedestrian, of course, must taught to look before he crosses the street, just as the automobile driver should be trained to stay on his side of the road. The ringing of the train bells and the blowing of locomotive whistles day and night in populated resident portions of town certainly should be reduced in volume and used only as a necessity in safe operation of trains. For the rather large volume of sound as an incident of making general "whoopee" in the residential sections of towns in all hours of the night, that is a matter for education and regulation by competent authorities.

HEART DISEASE AND THE PUBLIC HEALTH

It was not until about the beginning of the present century that tuberculosis was definitely recognized as a public health responsibility. Only recently cancer has been placed in the category of diseases constituting a public health problem. The fact is that it is not even so recognized everywhere now. The extremely communicable diseases like smallpox have naturally been looked upon as public health problems all the time. We are glad to be able to record the fact that now heart disease is coming to be looked upon as just as definitely a public health problem as cancer is.

Progress toward the control of the spread of tuberculosis is much more satisfactory now that it is realized that the disease is almost always contracted in childhood through exposure of infants and very small children to contamination with the fresh sputum and other discharges coming from tuberculous patients living in close contact with the infants. When it was learned that this infection was present in latent form in the children, to become manifest in later years, then it was that the most intelligent efforts could be directed against the eradication of the disease.

It is now realized that about seventy-five per cent of all cases of heart disease develop in children ten years of age or under, and that only about ten or twelve per cent develop in persons over forty years of age. Heart disease is one of the great killers of this country. More than twice as many people die each year from heart disease as do from kidney disease or from cancer or from pneumonia; and these four diseases constitute the four chief causes of death.

Another disturbing element is that the rate of death from heart disease is increasing about twice as rapidly as the rate of population increase. Often heart disease is congenital; that is, a child is born with the disease present, and in such cases nothing can be done to prevent its development and the probable early death of the child. The only thing in such possible cases that can be done is to pay more practical attention to the care necessary to safeguard expectant mothers. The other form of heart disease; that is, the form that is acquired after the healthy birth of a baby, is nearly always due to complications resulting from communicable disease, or to improper habits of living.

The group of diseases known under the general term as rheumatism is notably large. Rheumatism is at this time believed to be a germ disease. For many years the doctors and dentists have had a great deal to say about focal infections. In these conditions so-called rheumatism infection is frequently a result of diseased tonsils or decayed teeth, the germ gaining entrance into the blood stream through such conditions in the body. The chief thing to emphasize in this connection is that the best method of prevention of such conditions is to prevent, when possible, decayed teeth, and also to preserve, if possible, normal tonsils, through care for the gencral health of the child before and after birth, the prenatal care, of course, directed to proper hygienic living, proper food, and the freedom from disease of the mother.

The United States Public Health Service in a recent publication stated the tabulations of physical records of five thousand school children under their supervision showed that of the children whose tonsils had been removed for serious tonsillar infection in



A fine pair of Jackson County twins. At present both are underweight, but we hope that handicap will be removed at an early date.

the past, twenty out of every hundred had attacks of rheumatism, and of the children with defective tonsils which had not been removed, seventeen out of every hundred had rheumatism. With the former group, four had heart disease, and of the latter group, three out of each hundred had heart disease. The showing, however, for children who had normal tonsils

which had not been removed and which were not diseased was much better, not more than one-third as many having indications of heart disease.

The use of the word "rheumatism" is somewhat misleading, because of the fact that in the past so many poorly classified conditions have been diagnosed as rheumatism. This has been done to the point where the average intelligent physician feels that when the word "rheumatism" is used, it is done so as a general term, and means very nearly nothing. Much experimental research work remains to be done in this group of diseases before an intelligent classification can be made. It is sufficient for our needs in this discussion, however, to recognize the fact that heart disease is an increasing menace, and that it results from many communicable diseases as well as from improper habits of living.

In conclusion, we would like to emphasize again the fact that to do anything much with heart disease requires an early beginning, and it is one condition in which prevention is about the only logical procedure toward which all efforts at eradication should be directed.

WHO IS EDUCATED?

September and October this year have been disappointing to the State Board of Health officials and to the public health workers in general in North Carolina because of the fact that the presence of diphtheria, judging from cases reported throughout the State, has been just as serious, if not more so, than in previous years.

We have said it several times before orally and in print that there is today in North Carolina no excuse for a parent whose child has diphtheria. The reason for this statement is that toxin-anti-toxin properly administered to young children affords such a maximum of protection that it is exceedingly rare for any child to have diphtheria after immunity is secured through the administration of toxin antitoxin.

A short time ago a close personal friend of the writer, a university graduate and an important North Carolina educator, was detained at his home on account of an attack of diphtheria in his youngest child, a boy of six years of age. The child had started to school at the opening of schools in September. Naturally being exposed, as so many other thousands of children are every fall, for the first time to diph-

theria and other contagious diseases, not having had the protection afforded by toxin-antitoxin, and being susceptible to the disease, he promptly contracted diphtheria. The wife of this friend is an educated woman. Both of them have had access to the literature and other channels of information concerning every protective device available for the rearing of their children. Their home is located within four blocks of one of the four oldest whole-time health departments in North Carolina. The health officer in that county has been giving toxinantitoxin at frequent intervals to the children of all parents who would take the trouble to bring them to the office or arrange the schedule in the different sections of that particular county. The same thing has been done in many other counties, and yet there are literally thousands on thousands of children in North Carolina today who have not been given this protection by their parents. Our friends in response to the question as to why they neglected to protect their child through toxin-antitoxin last spring and summer, knowing that their child would start to school this fall and be exposed to diphtheria, replied that they just simply had not done it. They were not indifferent to the value. They were not in ignorance of its protection. but they simply had not got around to it.

A few days later we were in the office of the health officer of Randolph County just preceeding a county-wide teachers' meeting in which the superintendent of Randolph County schools was making a particular point to emphasize the importance of public health protection at his very county-wide teachers meeting held in the county. While we were sitting in the office conversing with the health officer, a nearby farmer came in with his two children, a little boy of four and a baby of fifteen months. They had been there for their first dose a week previous, and on entering the office the little four year old began pulling up his sleeve, and, with broad grin on his face, told the health officer he was "ready for another one." In less than a half minute the health officer had administered the second dose of toxin-antitoxin to the fine little chap. There was just about as much pain as a mosquito bite, and if the reaction is no worse than the average, that was the last that the little fellow would hear from that dose.

Now our question is, so far as public health protection goes, Whose education in these cases proved to be the most practical?

PRACTICE OF MEDICINE NOW REGARDED AS A PUBLIC UTILITY

Doctor Henry G. Longworthy is the treasurer of an organization known as the Inter-State Post Graduate Medical Association of North America. He wrote an article which was published in the September issue of the Nation's Business Magazine. He begins his article with the astounding statement that "The practice of medicine today may be regarded as a vital public utility function well regulated by law and well managed by physicians, hospitals and social agencies."

He pictures the physician of the

present day who practices medicine in the city as a "bedside medical engineer." He says that as a medical executive such a physician "engineers or calls to his aid at the bedside for the benefit of the patient, all necessary consultations, hospital facilities, nursing, diet, and all the other sciences. In many cases for the diagnosis and treatment of a single patient, this medical executive will use the services, directly or indirectly, of a dozen to a hundred persons."

The foregoing is true and it is what

is making the practice of medicine today one of the most complicated and costly of professions. It accounts for the enormous cost of hospital care. The sinister phase of it is that the successful physician can no more hope or expect to get back to old style economic individualistic methods than he can expect or desire to return to his saddle bags and home-made pills. The danger in the situation lies in the possibility of the physician (medical engineer) becoming of necessity a simple cog in a vast machine whose final superior may be a political cabinet officer. That is the spectre of State Medicine so many thoughtful physicians fear. In such an arrangement the individual patient would receive about as much personal and individual attention as one biddie in an incubator flock of ten thousand.

This is the day of big business. All of us think and talk in terms of billions, whether it be debts or Mergers and combines are in complete and glorious control of everything. The pendulum has simply followed the law of averages and swung back from the period of thirty years ago when no corporation or combine was too small or too poor to be kicked. What more natural then, in the mental state, than to regard the doctor along with the chain store operator as a purveyor of a public utility because he has something to sell that most people have to have at one time or another.

The writer in the aforementioned article quotes Homer Folks in a statement that the families of this country having illness in the course of a year pay out in actual cash on account of such illness the astounding total of two billion dollars. The same total amount is spent annually for public education—from kindergarten to post graduate universities. If cost in loss of time and other economic loss is included, sickness costs the American people every year about fifteen billion dollars. So, we see that in a way the

practice of medicine and the conduct of hospitals for sick people constitute about the biggest public enterprise in the country. That being true it is inevitable that business and medicine should form a new alliance, and the foundation stone of the enterprise must be preventive medicine. The prevention of disease is a public enterprise. To achieve its finest results it must be organized like an army, and in the struggle for the ideal of longer life and sounder health, the army must be composed of individual physicians. No faculty ever educated a student. What the student gets is the sum total of efforts made in his behalf by individual instructors. No medical society ever cured a patient. Some individual member of the group must assume full responsibility and do the job if the patient is to benefit. And that is what Dr. Longworthy meant by calling the physician a bedside engineer. If the mass of the people are to receive the benefits of this new alliance between business and medicine they that are well must be told how they may keep well. That is an individual problem. Each must read what some one person writes for him or he must be told by some individual. Who is better qualified than the physician? If the person who is sick is to benefit he must have the attention of an individual physician. In the final analysis the things that must be done to reach the ideal may be summed up about as follows:

- 1. Knowledge concerning the cause of disease and the prevention of its spread must be placed in the hands of every intelligent individual. This is a purely public health responsibility.
- 2. The services of a competent physician must be available for every sick person regardless of where he lives or how poor he is, for so long a period as he needs such service. This is obviously impossible at present. So the business part of this alliance between medicine and business must see that:

- 3. Hospital facilities are placed within the reach of all. The physician must practice more and more in connection with hospital and medical centers. These hospitals must be placed in the rural sections as well as larger towns. Under this arrangement the physicians will have available all modern methods of aid in diagnosis. Such a system will result in
- 4. Better care for the patient at much lower cost than at present. A physician will be able to treat many more patients, and to treat them more competently. Having his office

and home in such a center, even though it be in a small town, the office or ambulatory patients may receive assurance of more satisfactory care, and patients needing bed care can receive it easily. The cost must be many times less than at present, and the physician must receive much better compensation than he does now. Business methods can assure all this and the physician and patient will both retain forever the fine individual relationship that has obtained in the past, surely to the vast benefit of the patient.

DRIVING ON THE LEFT SIDE OF THE ROAD

Here we are again talking about traffic on the highways. However, in view of the fact that mortality due directly and indirectly to automobile accidents constitutes one of the major causes of preventable deaths in this State, we feel justified in continually writing something in the Bulletin about the matter. It has been necessary in the progress of the science of public health in driving away at the preventable causes of death to keep continually before the public these particular causes and how a different public attitude might result in preventing death from unnecessary causes.

There are not many rules for safety on the public highways, but the few rules that there are constitute some very important ones, the breach of which causes many deaths and much suffering among the people who are the victims. With the thousands of automobiles running along our main public highways every day at high speed, the least variation from the known methods of safety may at any time instantly result in death to one or more persons.

It has been our observation in our journeys to and fro around over the highways that a frequent cause of traffic trouble, accidents and death, is the man who persists in driving along on the left side of the road. There seems to be a large percentage of such pests exercising the privilege of driving automobiles all the time. This particular insect seems to delight in getting on a crowded highway piddling along at a low rate of speed on the extreme left-hand side of the highways in the country, and in the city or town he gets just as far over the middle of the driveway to the left as he can possibly get without having a collision with cars coming from the opposite direction. They seem to think that the roadway is better on that side, or that the atmosphere is more rarefied and purer, or they may do it for just pure carelessness. The driver who wishes to pass, even on an open road, has to wear his horn out calling attention to his desires before any notice is taken. By the time he reluctantly and slowly begins to turn in, one or more cars heave in sight coming from the opposite direction, which makes it impossible to pass, often for a mile or more.

The chief characteristic of the left side of the road driver seems to be his desire to drive along slowly. When coming meeting such a driver the legitimate, careful driver of an on-coming car almost has his hair standing on end before this pest seems to take notice and grudgingly turns back to-

ward the right, perhaps getting out of the line of traffic just about the time the driver meeting him has to slam on his brakes or leave the roadway entirely to avoid hitting him. Such a habit is dangerous for several reasons. One of the chief dangers, of course, is the impossibility of drivers of cars behind him being able to see an on-coming car, perhaps just before a road intersection, or, in their efforts to pass him, the on-coming car is obstructed from view, and accidents often result. Another thing, it is bad for the nervous system and therefore the safety of every driver of a car, and to the people he meets, to have his calmness or his equanimity

upset from any cause. Such driving frequently results in fatal accidents to pedestrians also.

After all, the question of driving comes back to the very old one of good manners. A polite, considerate, well-bred driver of an automobile will think of the convenience and safety of the drivers of other cars, as well as his own, and will therefore govern himself accordingly.

We would suggest to all persons reading these lines, who are accustomed to driving an automobile that they ask themselves the question: "Am I a left-hand side of the road driver?" If the answer is in the affirmative, our advice and request is to quit it.

BROKEN WINGS

By

SUDIE E. PYATT

Paul was falling from a couple of thousand feet above the earth. His plane had gone bad, the left wing was broken. He was crashing toward the earth at terrific speed with no time to adjust his parachute.

Just before he reached the earth that rose to meet his broke plane, he awoke swearing.

"D—n!" He could hardly breathe. That left lung, the one the doctor had pumped gas into that day was paining him as if a sharp knife had been driven through it. Pleurisy, and the spot still sore from the passage of the needle that had introduced the first shot of air into the pleural space between his lungs and his ribs, caused the pain. No wonder he had dreamed he was crashing to earth with a broken airplane wing.

Bird with a broken wing he was, and birds with broken wings never could soar so high again.

Paul groaned. The night nurse, a silent figure in white, a lantern bob-

bing by her side like a huge firefly, laid her hand gently on his arm.

"What is the trouble, Mr. Dunbar?"

"D—d bird with a broken wing!"
Paul sighed half asleep, but not forgetful of the pain in his left side—broken wing. "Never fly again.
No more stories from the pilot's seat of my plane—broken wings—"

Paul's voice trailed off into silence under the nurse's ministrations. When she left him he was sleeping again, peacefully this time.

Feature writer for one of his state's best daily newspapers, and airplane pilot good enough to have a transport license, Paul Dunbar had been sent three months before by physicians who would hear of no other course to the State Sanatorium suffering from a moderately advanced tuberculosis lesion in his left lung.

Paul should have responded to twenty-four hours a day rest in bed in a number of weeks, but he did not. The

lesion began to look as if it might become worse, and the physicians in the institution decided to administer pneumothorax.

Far from being a model patient Paul had objected at first, but had finally acquiesced. He had received his first treatment the day before the night he had had his dream of dashing from a great heighth in an airplane with a broken left wing.

Eighteen months of the sanatorium and Paul was in the superintendent's office receiving his final examination and instructions before leaving the institution to resume his life back in the world of men and women outside the san's wall.

Paul was now what the doctors called a quiescent case of tuberculosis. He would have to have the pneumothorax treatments continued, and he could work only a few hours a day. He supposed he should feel thankful that the "bugs" had not gotten him, but in Paul's breast there was a dull, glowering resentment.—"The bird with the broken wing never soars so high again."

—And sitting in the superintendent's office listening to his final words of instruction, Paul was dully aware that back in the world again he would be a bird with a broken wing, who would never be able to soar so high again. For the doctor said emphatically: "No flying for two years."

It had been nearly two years now since he had flown, strong and well up there against the sun. Two more years, four years before he could fly again! Was it worth it?

As Paul watched an army plane skimming over the hazy blue hills that surrounded the sanatorium he felt for a moment that he had fought in vain.

But the doctor had said he might return to his work on the desk for part time. Part time on the desk, he who had been his paper's star reporter, free to go in his plane to the ends of the earth if he could find there a

story for his paper, was to be a desk man, writing news that other reporters gathered, and handling copy that the fellows who could get out on the streets were too busy to write. Not yet twenty-five, he had run his gamut, was played out before his time, and all because of that bad lung—d—n broken wing!

The fellows on The Ashton News were nice to Paul. Nice because they were sorry for him, he thought, as deaf old Henry Clinard carefully wrote down for him the information about that Draketown Street robbery the reporter had brought in before he arrived, to make sure that he would understand everything connected with it.

Watching "Old Henry" Paul wondered how it would feel to never be able to hear a sound.

"Not so bad," Henry had once volunteered the information, "if you don't get cross with people who holler at you. Deaf folks don't like to be



On the Stump in Guilford.

bawled at any more than folks who can hear do."

After that Paul was always very careful to write out his communications with Henry, or to talk in a tone of voice that would make the old copy-reader feel that he was not bawling him out. Henry appreciated Paul's thoughtfulness, and there were many times when Paul's work would not have been completed in the few short hours he was on the desk if it had not been for Henry's aid.

Gradually there grew up between the deaf copy reader and the young re-write man with the broken wing the close bond of sympathy that always unites the incapacitated regardless of what the nature of the trouble is.

The first day Paul was back at his old position he noticed a flower and gift shop that had been opened up in his absence in the little niche next door to the newspaper office. It was spring, early spring, and the first yellow jonguils were blooming. The little shop was filled with the bright, sunny beauty of the yellow flowers, and just behind them stood a girl, whose hair was as sunnily golden as were the delicate petals of the jonquils, and the smile she gave Paul from dewy blue eyes, Paul was willing to swear, was made of pure gold itself.

"How much are they?" Paul found himself vaguely indicating the whole gorgeous display.

Again Jonquil smiled, for Jonquil her name must be, she was so much like the flowers.

"Twenty-five cents a dozen, or three dozen for fifty cents," and she had not finished speaking before Paul decided that her voice was as flowerlike as her face and her smile.

"O, give me all of them," he said carelessly.

"All of them?" A puzzled frown crossed the sweet, little face, something like a brisk wind blowing across a bed of flowers.

"All of them!" Paul repeated emphatically after her.

"That will be \$10, sir."

And Paul thought that her talking of prices was as if one of her yellow flowers had stepped out of its vase to do business.

"Where shall I send them, or will you take them?"

Paul looked puzzled for a moment. The jonquils would overflow his one room, bath and sleeping porch. "Send them out to the Bausman County Tuberculosis Sanatorium," he said quickly.

"To anyone in particular?"

"No, to all of the patients."

"What shall I put on the card?"

"From a 'Broken Wing,' only." Paul did not realize that his voice was bitter.

The girl smiled in quick sympathy, and for a moment Paul's black mood lifted.

"Say, isn't your name Jonquil?" he asked impulsively.

"No, it isn't, I'm sorry, but—" she stopped.

"I'm going to call you Jonquil."
"When?"

"Now, and every time I see you—you see,—" Paul suddenly found he was floundering helplessly. "I work next door on the newspaper."

"O, you're a reporter?"

"Yeah, sort of."

And with that Paul tipped his hat and went into the office. He had found suddenly that he would not like for this golden, blue-eyed Jonquil to think of him as a man with a broken wing.

Paul had been back on the desk at The Ashton News for three months when Lon Dale, the greatest airplane stunt flyer in the United States came to Ashton. Paul had flown with Dale in the days before he had known that he had lungs.

The stunt flyer's air antics and the reporter's ability at description had given The News many good stories.

Dale and Paul, who were very fond

of each other, were delighted to meet again. It had been two and one-half years since they had pulled one of the hair raising airplane stunts. They had not been together fifteen minutes before they were planning one of those thrilling flights of the old days, Paul forgetting once again that he had lungs—that he was a bird with a broken wing.

They buttonholed Bill Lacates, the managing editor, as he came in. It did not take them long to tell him what they wanted. A story in The News that Dale was back, and that he and the reporter were going to give again some of the stunts that had given Ashton citizens such a thrill three years before.

Bill listened, chewing the end of a villainous black cigar.

"Sounds fine, Dale," he disregarded Paul, "if you can get someone to go up with you to cover the flights, as Paul used to. Paul's not well, you know. It would never do for him to attempt it."

Dale's face fell, and Paul grew pale, his eyes blazed. "Bill, you have no right to say I'm not well enough to get that story, any d—n story I want to."

"Remember, Paul, you're a desk man now, and I'm the only one who can tell you to go outside, and I'm not going to tell you."

With that Lacates walked into his office, and Paul was left facing Dale, white and shaken.

"I'm just a bird with a broken wing, Dale. I can't even fly now by my doctor's orders. For a minute I forgot. Bill is right. That was his way of telling me, 'I'm no good'."

"Sorry, old boy," Dale rose and shook Paul's hand. "I was looking forward to some of our old stunts, but we won't now."

Paul sat at the re-write desk, smouldering resentment in his eyes when Dale had gone. The managing editor had really been kind not to let him attempt the dangerous physical strain the gathering of the material for the air stories would entail, but Paul did not want kindness, sympathy. He wanted his old red-blooded strength back. He didn't want to be a bird with a broken wing.

It was the night of the afternoon that Paul's managing editor had refused to let him take the air assignments that Paul learned that Jonquil was crippled, and that her beautiful, white-haired mother was blind.

He left the newspaper office, walking by the little flower shop with dragging footsteps.

"Hello!" It was Jonquil, whose real name was Marta Sennett, the flower shop girl.

Since the day in early spring when Paul had bought her total available supply of jonquils all at one time, the girl had not forgotten Paul, nor had Paul forgotten her.

To speak to her every day, and to stop in the shop a few moments to talk to her was almost a ritual with Paul—and with Jonquil, too, if he had known.

Further than the greetings and flower shop conversations the affair had never progressed. Whenever Paul thought of knowing her more intimately he immediately became hot, then cold.

A fellow with a broken wing had no business being more than the most casual of friends to a girl like Jonquil.

But tonight things were different. Jonquil had invited him around to her home, because she told him her mother was celebrating her fiftieth birthday, and she had been looking for him all day to invite him to the party.

Mrs. Sennett was seated by a window that looked down on the street when Paul let himself into the little apartment in response to her invitation to come in when he had knocked.

She called cheerily to him to come across the room to her chair, telling him that she knew who he was.

When Paul took the soft hand of

Jonquil's mother, and looked into the eager face raised to meet his, he realized with a start that she was blind.

Reverently Paul took the white hand, and bending touched it with his lips. He wondered why Jonquil had not told him before that her mother was blind.

Paul's surprises were not at an end. As Jonquil came from the kitchen of the little apartment, stripping off her work apron as she walked, he saw that she was crippled. Her left foot and leg to the knee was horribly deformed.

Looking at her Paul thought that he had never before seen Jonquil out from behind her flower counter. Crippled herself, her mother blind, she supported them both with the little flower shop. Brave, gallant girl! No wonder he had thought she was like a flower when he had first seen her. A wave of tenderness swept over him. He wanted to go to her, to lift her in his arms, and carry her so she would never have to use the hurt limb again.

Then his high mood fell. Bird with a broken wing, he was not even able to lift her slender body once, much the less care for her all of his life as he wanted to.

Paul touched Jonquil's slim, little hand softly. The blue eyes on his were questioning.

"It has always been that way," she said in simple explanation, looking down at the deformed foot. "You do not mind that I did not tell you." She indicated her leg and foot, her mother's sightless eyes. "Mother and I don't like to talk about it. We play all of the time that we are both well and normal, and it makes everything much happier for us."

Paul suddenly knew that her warm little hand was still in his. He pressed it quick and hard. "You wonderful girl, Jonquil."

Paul was happy, happier than he had been in a long time when he left Jonquil and her mother that night. Though happier he left railing mental-

ly against fate, life, whatever force it is, that sends young men out to fight life with broken wings, cripples beautiful young girls, makes blind lovely old women, and deaf good fellows like Henry Clinard.

Passing by Dr. Herndon Benson's home, Paul saw a light burning in the doctor's office at the side of the house. Doc had been a good friend to him all along, even when he had insisted on his going down to the sanatorium. He would stop in and talk to the doctor, see if the physician's training, and the hard philosophy of a medical man could help him to solve some of his problems.

It was late, but Dr. Benson received Paul with a smile.

"My, you're looking fine, young fellow. Weigh more than you did before going to the San, don't you? Not so bad this business of having one lung after all, is it?"

Paul frowned. "Mighty tough, doctor, when you want to do something so bad you can taste it, and people tell you that you can't because of your lungs."

The doctor looked thoughtfully down at a test tube in his hand. "Paul, to some degree almost every man, woman and child living is physically incapacitated. It may be only a very, very slight trouble, but the physically perfect man or woman hardly exists at all, any doctor will tell you."

"Guess that's true, doctor, but they don't have to go dragging around crippled wings like my lung, have deaf ears, sightless eyes and deformed limbs," Paul spoke bitterly.

Dr. Benson carefully laid down the test tube. "You are right at that, Paul, but did you ever think of the large number of people who fight organic troubles? I myself have a bad heart. It has been bad since my high school days. My wife suffers from high blood pressure, and has to stay away from many social functions she would like to attend. My oldest son can't play high school football because of

chronic bronchitis. Loretha, my daugher, is underweight and everyday of her life the food she has to eat is a trial to her."

"I know, doctor, but those are all disorders than can be cured."

The doctor shook his head, "Sometimes they can, sometimes not. We all have our lives to live, Paul, making them as worthwhile as possible, regardless of whether all of our physical organs are in perfect order or not. Perhaps some day we will breed a perfect race, a race that will not have to be bound down to earth by the needs and the disabilities of our physical bodies today. That time has not come yet, and those of us who are living now have to give our bodies the best care possible, paying particular attention to the weakest members. Then forget we have a body at all, and live our lives in spite of physical disabilities."

Paul got slowly to his feet. "There's a lot in what you say, doctor. I haven't

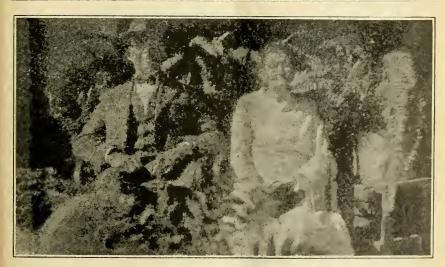
seen daylight yet, but I'm going to think things through. I hope I'll be able to see as clearly as you do, when I have thought them through."

"You will, Paul," the doctor laid his hand fondly on the erect shoulders of the tall young man. "Best of luck!"

As Paul walked homeward through the night the physician thought what a lucky chap Paul Dunbar was. Twenty-five years ago his disease rapidly advancing he would have probably died. Now, modern medical science had saved him, as fine a looking specimen of young manhood as could be seen on the streets.

The broken wing, Paul so bitterly complained of, the doctor felt sure Paul would find less of a disability as time went on. He would learn to live his life despite the broken wing.

In the gray dawn of the morning after Paul had been to Jonquil's mother's birthday party, and talked to Dr. Benson, he wrote the editorial "Broken Wings" that won for him that



This distinguished Jackson county couple are 82 and 85 years of age respectively. They have been married 57 years. They owned the second automobile in Jackson County. They still drive their own car and travel where they please. The husband operates a large farm and store. They lice in their own home but drive down town every nice day for a hotel dinner, Both of them read the newspapers and take a vital interest in all the affairs of the day.

year's prize for the best editorial written in the United States.

Donald Heitman, editor of The News, found the editorial on his desk and blinked when he saw the name. Dunbar writing editorials? Well, he would read it, and if it was passable he would use it, give the boy a bit of encouragement.

Heitman slowly read:

BROKEN WINGS

"The bird with the broken wing never soars so high again."

The airplane up against the sun, a wing broken dives swiftly to destruction for itself and its occupants.

Human beings, blind, deaf, crippled, with bad lungs, hearts and defective bodily organs, armless, legless, or in some way incapacitated are birds with broken wings—birds that can never again soar up against the sun.

To some degree all of us are incapacitated. Physical perfection, one hundred per cent is rarely ever found.

The wing broken, the machine disabled, shall the incapacitated give up, say life is over? No!

Modern medical science has gone a long way toward mending the broken wings of the physically and mentally incapacitated. The church has always done its share in binding up spiritual wounds.

The broken wing mended one must go on, forgetting—if he can—that it was ever broken.

—But it is impossible to forget the broken wing. Its strength is gone. It is not the same wing—"The bird with the broken wing can never soar so high again!"

True, he can not soar up against the sun, but what of the earth! All of us are closely bound to earth. The airplane gets only a very small portion of us away for a short time, from down there against the earth where we live. The broken winged must find interests upon which he can center his thoughts. Interests close to earth. He

can not keep his thoughts bottled up, thinking of the wing that is not working just right. He must forget he has a broken wing in the joy of living, not because, but in spite of something gone wrong.

Someone to love deeply, a hobby, music, reading, pets, flowers, a garden will all aid in throwing thoughts that might become morbid off their sinister trail.

You are not a bird with a broken wing, but a normal, whole, happy individual.

Happy with one's work, and in one's home the morbid thoughts seldom find time to enter, and when they do they do not stay long, where the sun that filters down to earth is allowed to come in.

The broken winged bird may never fly again, but the memory of the days when soaring up against the blue the earth was green below, the sun gold on his wings can never be taken away.

—And who knows, the bird with a broken wing may be able to soar up against the blue with the sun on his wings, again sometime!

There was an offer of a job from several big city papers after Paul's editorial won the prize. When his home town paper offered him the place as city editor with a salary large enough to support a wife and family on, Paul refused the big city job, and stayed on in Ashton.

Before he accepted the new position on The News he walked out to talk things over with Jonquil.

"Must I take it?" he asked.

"Take it? Why you know you'll take, Paul!"

"If I accept the place will you give up your flower shop and marry me?"

The dewy blue eyes had never been more flowerlike, as she raised them to Paul. "If you insisted long enough, and hard enough, I might."

"Even if I am a bird with a broken wing?"

"Hush!" Jonquil placed her fingers

lightly on his lips. "At our house we're going to play we're always well. I wouldn't marry a man with a broken wing, even if he were an angel, and

I know you wouldn't think of even looking at a girl with a crippled foot," Jonquil teased brightly as Paul silenced her with a kiss.

VACCINATION FACTS

By Frederick R. Taylor, M. D.

Vaccination against smallpox was the first great discovery of preventive medicine. In 1798 Dr. Edward Jenner, an English country doctor, after fifteen years of painstaking observation and record keeping, published his epoch-making paper entitled "An Inquiry into the Causes and Effects of the Variolae Vaccinae, a Disease Discovered in Some of the Western Counties of England, Particularly Glouchestershire, and Known by the Name of the Cow-pox." The modesty of this great benefactor of mankind is shown most impressively in Jenner's reply to a Mr. Cline of London, who promised him the stupendous sum of 10,000 pounds a year income if Jenner would consent to settle in London. Jenner replied to this offer, "Shall I, who even in the morning of my days sought the lowly and sequestered paths of life, the valley, and not the mountain; shall I, now my evening is fast approaching, hold myself up as an object for fortune and for fame? Admitting it as a certainty that I obtain both. what stock should I add to my little fund of happiness? My fortune, with what flows in from my profession, is sufficient to gratify my wishes; indeed, so limited is my ambition, and that of my nearest connections, that were I precluded from future practice, I should be enabled to obtain all I want. And as for fame, what is it? a gilded butt, forever pierced with the arrows of malignancy"

What has vaccination really accomplished? The following data are copied from the article on Vaccination by

Professor George Dock in the second edition of Osler and McCrae's "Modern Medicine." He writes:

"Coincident with the rapid spread of vaccination was a marked fall in the extent and mortality of smallpox all over the civilized world-. In London, in the years 1761-1800 the mortality in the successive decades was respectively 24,234, 20,923, 17,867, 18.477. In the first two decades of the 19th century it was 12,534 and 7,856. Toward the end of the second decade of the 19th century smallpox began to increase, and in some countries became almost as prevalent as it had been before. The causes of the recrudescence are not difficult to understand. Many people had been vaccinated so long before that they had lost their immunity wholly or in part. This was the time to settle the question as to the life-long protection which the early vaccinators so fondly believed in, but prejudices were still too strong. Many other people were not vaccinated at all, because smallpox was so much less frequent that the operation seemed unnecessary, and there was a smaller proportion than before not protected by smallpox." (One attack of smallpox, when it does not kill, protects against subsequent attacks.)

"Looking back, it is clear that certain great changes had occurred in the smallpox situation since Jenner's discovery. The absolute mortality was less; the disease was not so frequent as before in the years following the usual age of vaccination; and these facts were most obvious in countries

that had the most thorough vaccination. The change in the age-incidence is interesting. Smallpox was commonly spoken of in Germany in the prevaccination days as "Kinder-pocken' (children's pox). Of 1252 cases of smallpox before vaccination 94% were in children less than 10 years of age, and no case above 20. Of 1677 cases after vaccination, only 18% were under 10 years of age, and 42% over 20. Epidemics were smaller, and mild cases, long known, but rarely mentioned, became relatively more frequent

"In this period revaccination began. Suggested early in the century, it was long neglected. Certain German states first applied it to their armies.....

"The most striking test of the possibilities of vaccination was made in the war of 1870-71, and depended largely upon the far-sighted care of the German military authorities. Smallpox became so prevalent in France in the preceding winter, that efforts were begun to combat it, but the outbreak of the war not only prevented such action, but as usual caused a great increase of the disease which rapidly extended over Europe. In Germany, where many prisoners of war carried the infection, the disease was widespread; but it was a striking fact that the German soldiers were not only less frequently and less severely affected than the French, but that they were less affected than civilians of military age in the same towns. The only difference was that all the German soldiers under arms at the outbreak of the war had been revaccinated within two years. The following figures show the mortality of different classes at that time: revaccinated 5%, once vaccinated 14%, unvaccinated 45%. This object lesson was not lost on the newly formed German Empire, In 1874 the first law was passed providing for the vaccination of every child before the second year, and of all school children in the twelfth year. The result of the

operation was to be a matter of record, and failure to produce a satisfactory vesicle necessitated a repetition. In the civil population the mortality sank rapidly, so that in 1910 the deaths in the whole empire was only 33 (15 being foreigners)."

The work from which the above is quoted was published in 1913.

Cecil's Text-book of Medicine by 130 American authors, published in 1927, has a chapter on vaccination by Prof. D. Murray Cowie. The last two paragraphs of his chapter show how little smallpox can be influenced by the best methods of sanitation and quarantine, and how completely it can be controlled by vaccination. They read as follows:

"In no country since the discovery of vaccination have as rigid sanitary measures been carried out as in England-notification, strict quarantine of patients and contacts, and careful disinfection. On the other hand, in Germany where more attention has been paid to vaccination and revaccination, the death rate from smallpox has been much lower. From 1875 to 1905 England and Wales had 8,342 deaths compared with 1,115 in Germany (Schamberg), Vaccination and revaccination became compulsory by law in Germany in 1874. Since that time smallpox has ceased to be an epidemic disease. Unquestionably, vaccination and revaccination is the most important method of stamping out the disease.

"General Leonard Wood records the experience of two battalions (700 U. S. soldiers) in Holguin, Cuba, in 1898: 'A large number of American soldiers under a fair state of discipline was sent into a country infected with the most virulent type of smallpox, where the death rate was heavy and all sanitary conditions were against them, and although living for months in towns infected with the most malignant type of smallpox, to which they were constantly exposed, not a single case occurred in the regiment"."

Yet, there are still some people who oppose smallpox vaccination! It is very difficult to see why this should be so. Two arguments are advanced in objecting to vaccination that are thoroughly fallacious. These are:

- 1. That smallpox is now so mild that vaccination is unnecessary.
- 2. That vaccination itself is occasionally fatal.

Let us consider these supposed objections for a moment.

1. Any infectious disease that cannot spread fast usually becomes of a milder type. Smallpox is no exception to the rule. However, smallpox is getting milder only because vaccination prevents its rapid spread. Experience has shown repeatedly that where vaccination is neglected, smallpox begins to spread more rapidly again and becomes as deadly as ever. Moreover,

even where it is usually mild, some severe and fatal cases are sure to exist.

2. Vaccination is occasionally fatal, as is sewing with a needle, as pricking the finger may be fatal. The risk is, however, so nearly absolute zero as to be absolutely negligible—not for ore moment to be compared with the risk of riding in an automobile. It is not even to be compared to the risk of going down one's steps at home—a performance that kills or cripples some people every year. Smallpox is a serious risk, on the other hand.

If everyone were simultaneously vaccinated, smallpox could be literally wiped off the face of the earth, and the germ that causes it would become as extinct as the mastodon or the saber-toothed tiger, and would never again plague mankind.

Let's all get vaccinated!

COLLEGE BLUES

By

KARL A. MENNINGER, M. D.

Each year thousands of college students fall by the wayside. The wiseacres have many explanations and very little remedy. Too many students are going to college. The pace is too fast. The ideals are wrong. The faculties are incompetent. The curricula are inappropriate. Above all there is too much money and too much frivolity and too much social life. College students have much too good a time.

The mental hygienist is somewhat out of sympathy with these explanations. He does not deny that some of them may be true but his pragmatic sense is offended by the futility of generalization. His whole point of view is individualistic. Leaving problems of curriculum and world politics aside, he is interested in what has put a particular John Smith and Mary Baker out of the running. The loss of

John Smith may mean little to the college; the loss of Mary Baker may not greatly distress the world, but some of these Johns and Marys are worth saving if any one is. The boy or girl who gets to college is one in a hundred. He is engaged in a period of enormous importance to himself because it is his preparation for a specialized contribution to the world. For the same reason it is a period of enormous importance to the world.

For the past ten years psychiatrists have been trying to make people understand that mental hygiene is not a matter of preventing insanity. Psychiatrists are not particularly interested in insanity any more. Of course the insane are numerous; in fact, they quite outnumber the college students. But far more numerous are the unhealthy minded. By the unhealthy

minded we mean the unadjusted, the unhappy. One of the Survey's contributors some time ago wrote under the title, "The unhappy are always wrong." This is true. At any rate the unhappy are always in need of mental hygiene, whether their unhappiness is conscious or not. There are lots of mentally unhealthy people who are not unhappy but who ought to be. These too are included in the mental hygiene program of today.

Mental hygiene aims at the prevention, the deflection one might say, of human failure. If it is to be effective its efforts must begin months, if not years, before the student flunks out of college, or has a nervous breakdown or shoots his room-mate or enters an asylum, or arrives at some other shocking and often irrevocable extremity.

Consider for a moment what the college freshman faces. He leaves the high school to enter a college. From being a senior with all that it means, he becomes a freshman with all that it in turn implies. From town or country he may transport himself to a city, and to a very sophisticated and complex group within the city, From living at home, with all the protection and consideration which that includes he enters a rooming house or fraternity house. Meanwhile he (or she) is changing physically. The average college freshman is almost, but not quite an adult physically. This state of almost is very difficult, as every one knows except those who have never reached it. Then, too, there are acquaintances to make of the same and of the opposite sex, and there are certain attitudes to be taken and certain gratifications to be sought and certain new lines of inhibitions to be set up and certain old ones to be down. There is practically a new spoken language to learn and a new set of taboos and a more or less thoroughgoing revision of aims and ideals.

In addition to these general problems college students have a lot of specific problems about which the outside world knows nothing or which it judges unsympathetically. There are problems of athletic ambition and disappointment: the world hears only of the successes. There are problems of Greek letter fraternities, both inside and out, which only one in close contact with students can fully realize. There are problems of love affairs dealt with in the immature fashion to be expected at this stage, but also with an intensity which the unsympathetic may easily underestimate. There are problems of jealousies and envies inside and outside of the family, conflicts with parents, special antipathies to subjects and instructors, religious problems, curricular problems, physical problems real and imaginary, lifework problems, racial problems, economic problems; in fact all the problems the older people confront, plus a great many more. Think of all this faced by a freshman student of only average intelligence, of average emo-



Folks, please meet the New Sister of our two old friends from Greensboro.

tional control and average ability, at the average American college or university at the average age of eighteen. Surely it is not surprising that some of them have "adjustment difficulties" and are sent to the mental hygiene counsellor or seek his help voluntarily.—Survey Graphic.

OUR LIVES SHORTER, NOT LONGER

So at least concludes C. H. Forsyth of the Department of Mathematics at Dartmouth College, from recent statistical studies, whose results he presents in Science (New York). average lives of the young have been increased, but the old die earlier. Unless adults can manage to live more sanely, it will be a losing fight for the elderly, he concludes, at least for some time to come. Those who feel justified in predicting marvelous increases in the average length of life have failed to appreciate, says Mr. Forsyth, that practically all reductions in the deathrate have been in children's diseases, and that little or no attention has been given to ages beyond the prime of life. He finds that conditions in this country at advanced ages have long been on the down grade, and that the great gains at early ages are already more than offset by the losses at advanced ages. In brief, the surprising conclusion is that the average length of life in this country is now actually decreasing. Writes Mr. Forsyth:

"The main results were obtained from abridged mortality tables constructed from the statistics of the males of the ten original registration States—the new England States and Indiana, New Jersey, and New York—the only States which have supplied satisfactory records since 1900—and even 1890. The results for females are not given here, but present the same picture—in somewhat less smooth form.

"It will be understood, of course, that there is an average length of life corresponding to each age—the average length from that age on—although it is usually called the expectation of life in that case. In working with abridged mortality tables it is

necessary to omit the first few ages—say, before the age of ten—for well-known reasons, but the expectation at age ten is usually a rough approximation of the average length of the whole of life.

"During the thirty years from 1890 to 1920 the expectation of life at age ten-and therefore approximately the average length of life-increased markedly. The results for 1920 proved a little disconcerting for a time, for that year showed not only unexpected improvement at the early ages but also fairly satisfactory conditions at advanced ages. The abnormality the year 1920 should have been appreciated at that time, however, because we were just recovering from the 'flu' of 1918, and the improvement could have been easily explained as a natural reaction.

"Every one has been familiar with the consistent improvement of conditions at earlier ages, and some have been more or less aware of the situation at advanced ages, but there is no printed evidence that any one was sufficiently aware of the seriousness of the latter situation to propose the pertinent question of whether latter situation would ever develop to the point where it would dominate. In any case, the question is no longer pertinent-the decline at advanced ages already dominates, and the average length of life-or at least the expectation from age ten-is already going down. The curves for the years 1921 to 1927 inclusive tell their own story. The expectation from age forty-five or fifty on is the lowest of which we have any record-far lower than it was even forty years ago-and it is still going down, not up.

"The changes in death-rates previ-

ous to thirty are not significant, and although it might well be argued that little significant change could be expected in a short period of only seven years, by the same logic the changes in the neighborhood of age seventy are tremendous.

"It is well to recognize that improvement at the early ages has a rather definite limit, and that the decline at advanced ages has no appreciable limit. It follows naturally that with all the improvement in the world at the early ages the present downward trend at the advanced ages, if unchecked, will continue to dominate and produce a greater and greater net decline in the average length of life.

"The great decline at advanced ages is remarkably concentrated about age seventy, although it extends as far back as age forty. To me, the whole picture, from our earliest records in 1890, to the present time, points consistently and inevitably to a future of a declining average length of life until the American adult wakes up to the fact that the odds are at present heavily against his living as long as his father or grandfather. Some will say -and no doubt truly-that it is all a natural consequence of the great drift to the cities. Others will go farther and say life has become too fast and strenuous, and that we do not know as yet how to adjust ourselves to such a life.

"To the medical authorities the whole problem will loom as one of relieving the strain upon the heart. But little will be accomplished until the American adult himself is duly informed and made to realize that he is in the midst of a decidedly losing fight, and that the situation will continue unless he applies himself energetically to be superior to his environment. Moreover, each adult must fight his own individual battle, since he usually brooks no interference with his own individual mode of living. Medical authorities and scentists can be depended upon to care for the children and their diseases, but they have little or no chance to interfere with the lives of adults.

"It truly looks as if it is going to be a losing fight for some time come, for although some adults are making a commendable effort to live sane lives, the vast majority seem very indifferent, and many give apparently no thought whatever to habits which they clearly know are bad, and which they know they could easily discard. There is surely no worse influence than that wielded by wellmeaning authorities who go around airing their ill-founded beliefs that all is going fine and that before long everybody is going to be living seventy-five to a hundred years."—The Literary Digest.

COMMON SENSE AND THE OPEN WINDOW

By

Arnold H. Kegel, M. D. Commissioner of Health, Chicago

Do you sleep with your window open? Recent discoveries in the science of ventilation throw interesting sidelights on the ventilation of sleeping rooms and tend to modify to a considerable extent previous opinions and practice.

Less than a generation ago we heard a great deal about fresh air and foul air. All outdoor air was labeled "fresh," for want of a better term, and air indoors was supposed to be "foul." These terms are fast disappearing from our literature. Flugge

of Breslau, Germany, and Leonard Hill, of England, have shown conclusively that the bad effects in a poorly ventilated room, the headaches, and general feelings of discomfort, are not due to some mythical substance in the air that renders it foul, but to an excessive temperature, a high humidity or a combination of the two. Furthermore, we have learned that the air from out-of-doors is not always more desirable than the air indoors. This is particularly true in Chicago and other large cities where the outdoor air is constantly contaminated, particularly during the winter months, with smoke, fog and dust from various sources.

Do you sleep better with your window open? Analyze and consider this question without prejudice or preconceived opinion. Suppose you have a north room provided with an ordinary wooden sash double-hung window without weather strips or a storm window. The weather is cold: Jack Frost flirting with the zero mark on the thermometer, and a moderate wind. say ten miles per hour comes from the north. The leakage of air into room between the sash and casement and between the upper and lower windows would be under these conditions about 60 cubic feet per minute with the window closed. Now, an ordinary adult requires for respiration about one-third of a cubic foot of air per minute. So, for the purpose of respiration, the leakage around a closed window will supply him with about 180 times the amount of air necessary.

But to promote circulation of air in the room, and to ventilate in a satisfactory manner hygienists have set a standard of from 25 to 30 cubic feet of air per minute for each person. This is a very liberal allowance. With a leakage of 60 cubic feet per minute around a closed window under the conditions mentioned, we still have twice the amount of air required to ventilate the room when occupied by one

person, or an ample supply for two persons.

Let it be clearly understood, however, that we are not advocating as a general proposition that Chicago's citizens sleep with the windows closed. We are only pointing out that in cold weather there is no necessity for opening the windows to any considerable extent under the false impression that this practice is necessarily desirable or healthful.

By all means, sleep with the window open. Open it wide when the weather permits. But do not make a fetish or a fad of open window ventilation. Do not boast to your friends that your window is always wide open irrespective of weather conditions. This practice does not indicate the best of judgment on your part. Direct drafts, particularly when one is sleeping, are productive of colds and tend to increase rather than decrease our death rate during the winter season from influenza and other respiratory diseases.

There is much the medical profession does not know about colds, but there is ample evidence that a simple cold is a local infection of the membrane lining the nose or throat. Quick changes in temperature, uncomfortable drafts, or chilling of the body upset or disturb the control of blood flow to these parts and favors the spread of infection. In this way a simple cold becomes severe as the infected area increases. If the infection invades the finer structure of the lungs, pneumonia may be the result.

Rest in bed and a comfortable even temperature are the best ways to treat a cold and prevent serious complications.

Use common sense in opening your window. Young adults who are strong and robust may profit by the practice. This, however, is not necessarily so of children, of the aged, and of many of all ages who are not particularly rugged or are susceptible to colds and drafts. And we strongly suspect

that even the robust sometimes enjoy good health in spite of the wide open window in cold weather rather than because of it.

Be comfortable with the window open. Physical comfort should invariably be your rule governing sleeping room ventilation. If you sleep better and awaken refreshed with the window open a fraction of an inch, that is the best condition for your individual requirements. If you sleep better with the window wide open and the chilling drafts are pleasant rather than disagreeable, by all means open your window wide. But do not throw open your window in cold and inclement weather and retire with chattering teeth and sleep with a blue nose and general discomfort under the mistaken idea that it is healthful.

A person may sleep in cold and windy weather with the window closed without the slightest fear of bad results from a deficient air supply. Leakage about and between the sash will supply sufficient air for breathing purposes. It is usually desirable, however, to have the window open to some extent; the reason for this is not to obtain more air, but rather to cool the sleeping room to a comfortable temperature and promote air circulation. This should be approximately 10° below that of the living rooms.

One should understand that the important considerations in maintaining healthful conditions in the sleeping room are a comfortable temperature and clean air. In many parts of the city, the outside air contains an excessive amount of soot and dust. It is advisable to use a cheese cloth screen beneath the lower sash of the window. An ordinary fly screen can be easily adapted for this purpose. The wire screen is left in and covered with a piece of clean cheese cloth. breaks up the strong currents of air that produce unwelcome direct drafts, and also filters out the greater portion of the soot and dust .- Chicago Health Bulletin.

DOSERS ByD. E. FORD, M. D.

He poked his head around the edge of the door and gazed hopefully into the office. A strange presence pervaded the room like a thin blue-green fog.

"The Welfare Lady says will Dr. Ford cure me."

"Working?"

"The fertilizer man says to keep away 'till I'se cured."

The pain is evident as he limps into the room.

"Mah blood's bad," he explains as he begins to unwind oozy rags from his legs.

The stenographer has vanished. With the loosening of the dripping bindings slices of side-meat slide to

the floor revealing large and luscious ulcers up and down his shins. Perfect specimens of ulcers—beautiful examples for a medical class.

I don't blame the fish factory for casting him out. But why pick on me! "How long have you been like

that?"
"Three months—maybe four; but

they want so bad then."
"Three months! You've let your legs rot like that for three months and done nothing?" Stronger words may have slipped out.

He straightens up; the worm is turning, indignant at the false charge of neglect.

"I've done everything every one told

me! I've put on collard leaves and vinegar, bread mash, fish meal, and kerosene oil. I got a black salve at a drug store, I've tried spider webs, turpentine and side meat. I've done everything anyone told me!"

He leaves the horrid impression that—along with the side meat—someone told him to come to me.

He did everything every one told him!

While the janitor is called to do the proper things to doors and furniture, the right things are done for the patient. He departs, leaving a specimen of blood and a lingering impression of a strong personality. He is to let the bandage alone and to return in two days—unless someone, meanwhile, tells him different.

He did everything everyone told him to do! Better men than he—and women—do the same. Oh! how we abuse our bodies and those of our children, doing what well-meaning somebodies advise!

A tired feeling! A pain! Can't sleep! Sleepy all the time! The baby cries! The baby won't cry! Any condition of body or mind. Free advice gathers around. Friend or stranger—each has a sure-fire remedy. Free? Why they beg you to take it! Read the glowing promises in the newspaper advertising. Read the wonderful testimonals on the colored wrappers of the big bottles—testimonials that are offered at so many dollars per hundred for any medicine manufacturer to buy.

Free? The advice only is free. Who pays for the pages of advertising,

for the quarts and pints in funnyshaped bottles on the druggist's shelves and in the parcel post? The dosers pay. The chronic dosers and home remedy folks pay more every year for useless or harmful stuff than all the hospitals in the country receive.

Illness, simple and easily cured in the beginning, grow by ignorant neglect and harmful dosing to serious conditions. Finally someone trained to understand the body is called—a doctor's advice is sought.

When you want a dress made do you patch it together on every neighbor's free advice? No, you go to a dressmaker, one whose business is to know dresses. When you want your house painted do you listen to the advice of the colored delivery boy whose father used some paint once? No, you get a skilled painter. When you are in jail, you hire a man trained in the law.

But when you run a fever for days or have a chronic headache or most anything—you follow the advice, first of anyone not trained to know the causes of illness. If one recommendation doesn't work another may be tried until the sickness gets beyond endurance.

Too often it is when strength is gone and pocket-book is flat, after everything freely advised—even to "side meat"—has failed, that skilled trained advice is hired. And too often an immediate miraculous cure is expected for a condition which, though simple at first, has progressed too far for help.—New Bern Times.

OUR BACK COVER CARTOON THIS MONTH

We hear much discussion of the present tendency of the younger generation to indulge to excess, or seemingly so to their parents, in the fast living incident to the present day. It is probable that just such apprehensions have been expressed ever since civilization appeared on this earth.

Seriously speaking, it does seem to this writer that many of our finest young people are indulging to excess in such pleasures as dancing and cigarette smoking, to mention no other excesses. Excessive smoking indulged in by boys and girls in their teens is unquestionably detrimental to their health. Excessive indulgence in the pleasures of dancing, requiring much loss of sleep, irregularities of various sorts, to say nothing of the emotional excitement, means that young people indulging to excess are drawing from their bank of health, resources that they will need in later years.

The foregoing is merely introduc-

tory to the statement that our cartoon this month is drawn by a talented young man who is at present serving a term in the State's Prison. We know nothing of his guilt or innocence, but we do know that he is in position at present to observe some of the disasters that overtake young people who lose their balance and embark on a course liable to end in disaster.

HOW VERY FEW OF US DIE

By

WM. BRADY, M. D.

Probably many readers know that when I think anybody or anything is wrong I like to say so in print. Not so many know that I apply this policy to myself when I happen to be the wrong one, for now and then I have been wrong and I have acknowledged it freely and just as soon as I could.

Met a man connected with the life insurance business, and he seemed surprised that I oppose a departure of certain insurance companies that is variously called health conservation, longevity service, and the like. I told him that primarily I objected, as a buyer of insurance, to paying the additional cost of such service; and secondarily I do not believe all of this adventuring by insurance companies in other fields of work has any tangible effect on the health of their policyholders.

My friend came right back there. He assured me that the statistics were available to prove that this health or medical work by the insurance corporation actually lowers the cost of insurance to the public, to the individual buyer. There he had me, for in all fairness I was compelled to reply that if I were convinced of that I should cease opposing these activities of insurance companies and become a booster for such practice. Insurance

of all kinds is a great boon and for comfort and peace of mind while we live and the well being of our loved ones after we've passed along. I say with all fervor "God bless the life insurance business." In the same spirit I maintain that the use or administration of funds in the insurance company's keeping is a matter that is your business and mine, and up to the present, or until I met this man I refer to, I have felt quite positive that this adventuring in health, in public health activities, in what should be private medical practice matters, is an unjustifiable diversion of funds, and accordingly I have opposed this fad of certain insurance companies whenever my views or advice have been sought.

Well my good friend saw to it that the cold figures were placed in my hands. They were impressive figures, too. The mortality rate, that is, the number of deaths, occurring among each thousand persons in the year, is given in a chart, first that of the population of the country at large, and alongside it the rate among several million policyholders of this particular company. It shows that the death rate among the people at large was rather lower than that of the policyholders in every year from 1911 up to 1925. In 1925 the insurance company's rate

finally got down to that of the whole country, and in the past three years the policyholders have been holding out a little better than the people at large.

At first glance such figures might seem to justify the argument that this health work by the insurance company lowers the cost of insurance to the buyer for of course the premium rate on your insurance is determined by the death claims the company has to pay. But the figures must be interpreted with the fact in mind that the

policyholders are selected risks, and the many applicants rejected as poor risks must figure in the mortality rate of the population at large. These considerations, it seems to me, invalidate the argument that this health adventuring by the insurance corporation lowers the cost of life insurance. To draw that conclusion it would be necessary to ignore the effect of all public health and in fact all other activities or work than that done by the insurance corporation. — Raleigh Times.

AN ENCOURAGEMENT

The deathrate for tuberculosis during the first half of 1929 was unprecedently low for this part of any year. The rate for white policyholders was only 73.6 per 100,000. This marks a decline of 3.3 per cent over the record for January-June, 1928. There was, also, a 7.8 per cent drop for the colored insured. These new declines have taken place despite the influenza outbreak which was responsible, during the first quarter, for hastening the deaths of large numbers of tubercular patients. It is now assured, almost beyond peradventure, that the end of 1929 will see another new minimum mortality figure for tuberculosis in the United States and Canada; and that this figure will be well below the former low point established only last year.

HEART DISEASE LEADS ALL THE REST The "Degenerative" Diseases

The combined deathrate for the three principal "degenerative" conditions (heart disease, chronic nephritis and cerebral hemorrhage) rose slightly as compared with the first half of last year. This was due entirely to an increase for heart disease.

Deathrates from Alcoholism, Cirrhosis
of the Liver and Acute Alcoholic
Poisoning Are All Increasing

Alcoholism, exclusive of acute poisoning by wood or denatured alcohol, was the reported cause of death of

321 Metropolitan Industrial policyholders during the first six months of 1929. This number corresponds to a deathrate of 3.4 per 100,000, and marks an increase over the corresponding period of last year, when there were 284 deaths and a deathrate of 3.1.

The deathrate from alcoholism continues to run much higher in the industrial population of the United States among Canadian wage-earners. This has always held true-both before and since National Prohibition. Of the 321 deaths from alcoholism, so far this year, only six affected Canadian policyholders, who number approximately one and one-quarter millions. Since January 1, 1922, a period of seven and one-half years, there occurred 3,818 deaths from alcoholism among Metropolitan Industrial policyholders. Only 43 of these were deaths of Canadians.

Six hundred and fifteen deaths were reported from cirrhosis of the liver, which is closely associated with alcoholism. The deathrate was 6.6 per 100,000. During the like period of 1928 there were 578 deaths, with a rate of 6.3. Deaths from acute poisoning by wood or denatured alcohol are of little importance numerically, but have lately been showing a tendency to increase.—From Statistical Bulletin, Metropolitan Life Ins. Co. 1929.



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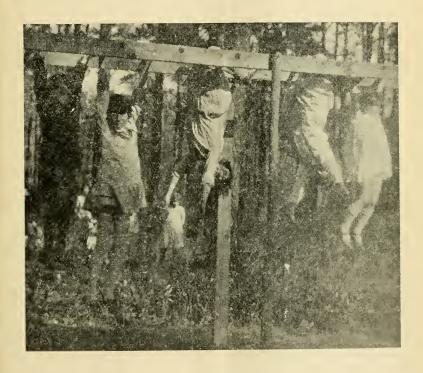
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For a number of years we have been proclaiming the desirability of utilizing home-made equipment for playground exercises. Here at a two teacher school in Columbus county is a fine example of the practicability of such devices. This is called a walking ladder. Six year old girls as well as boys climb up these poles and walk by their hands from one end to the other. As the photograph indicates there is hardly any limit to the kind of exercises possible with such a device.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Catarrh Care of the Baby Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies

Fly Placards German Measles Hookworm Disease Infantile Paralysis Indigestion Influenza Malaria Measles Pellagra Public Health Laws

Prenatal Care

Sanitary Privies Scarlet Fever Smallpox Teeth Tuberculosis Tuberculosis Placards Typhoid Fever Typhoid Placards Veneral Diseases Water Supplies Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C .:

Prenatal Care (by Mrs. Max West) Infant Care (by Mrs. Max West) Prenatal Letters (series of ni of monthly letters)
Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who
Want Better Babies Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age)
Baby's dally Time Cards: Under 6
months; 5 to 6 months; 7, 8, and 9
months. 10, 11, and 12 months; 1
year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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HEALTH CALENDAR

FEBRUARY

As a rule, during nearly all the year the climate of North Carolina is seldom too cold in winter to produce much discomfort or suffering, and it is infrequent that the weather in summer is too hot for a sufficient length of time to produce illness as a result.

About the only month in the year which affords any exception to the foregoing statement might be said to be the month of February. In most years, although it is the shortest month, it generally has more disagreeable weather than any other month. For most of our people, who enjoy outdoor life, certainly to some extent, during most of the year, the cold, disagreeable days of February sometime cause more indoor crowding than any other period in the year. This results in an undue prevalence of the respiratory infections. People are crowded more in the stores, in street cars, and in their homes, and infection therefore is more easily spread from person to person on account of the close contacts necessary.

The records always result in a rather high death rate from pneumonia during this month, and other diseases of like character. It is a month generally fraught with more danger than usual to old people, especially those who suffer to some extent from chronic ailments, such as bronchitis and so on. It is literally mid-winter for the children in the schools. Ventilation, and at the same

time a comfortable atmosphere, is a little harder to maintain during this month than other months, thus making respiratory troubles more common in the schools.

Another deficiency which everybody suffers is from the scarcity of fresh vegetables and fruits which are available in more abundance during other months. For those who financially able to avail themselves of the abundance of fresh stuff, imported from Florida and other places in the far South, the deficiency is not so acute, but as about half the population of the State live on the farms and are dependent on the products of their own gardens and fields for food, the deficiency is sufficient to result in temporary impairment of health at least.

These handicaps may be overcome to a certain extent by concerted effort on the part of every one responsible. A little more care may be directed toward the heating plants and the ventilation of school rooms. The same thing may be undertaken by the householders in the homes, no matter what kind of a heating plant there may be, whether open fire place or steam heat; and a satisfactory effort may be made to procure at least some fresh vegetables every day; and for the old people a little extra care as to food, sleeping and clothing requirements may help considerably in coming through the month without any impairment of health.

We cannot close this subject in

any more satisfactory manner than to return to our old slogan, namely, "A Garden for Health" for every family in the State who can afford it.

Doctor Henry Albert, State Health Commissioner of Iowa, sends out the following suggestions which he suggests might reduce the liability to pneumonia and other respiratory infections to a minimum:

- "1. Avoid persons who have coughs or colds and are sneezing.
- 2. Avoid use of glasses and dishes which are not properly washed.
 - 3. Avoid visits to persons ill with

colds, influenza and pneumonia.

- 4. Wash your hands before eating and after caring for the sick.
- 5. Dress warmly and avoid unnecessary exposure.
- 6. Do not use towels or handkerchiefs used by others.
- 7. Avoid a starvation diet but do not over-eat.
- 8. Sleep with the window in your room open but be warm.
- 9. Keep the temperature of the house and office at not over 70°.
- 10. Cover mouth and nose when coughing or sneezing."

AN OLD STORY

In one of the weekly papers of North Carolina which comes to our desk we noticed the following item in one of them in its issue of the week preceding Christmas. Naturally are not giving the name of the paper, the county, nor of the parents of the child, because such items are constantly occurring here and there in every county in the State. So there is no good service to be performed by calling out the names of delinquents of this nature, and it would only serve to hurt the feelings of the parents. We would not mind hurting the feelings of the parents if we thought it would protect any of their remaining children. However, if the physician attending the sick child was worthy of the name physician, he has before now thoroughly impressed upon the parents in this particular instance the importance of protecting every remaining child diphtheria. Following is the item:

"The many friends of Mr. and Mrs.
——sympathize with them in
their sad bereavement caused by the
GAL TWO—

death of——, one of their twins, which occurred December 12th at their home in———. When little——— was taken sick they supposed

it was a deep cold, but it was discovered to be diphtheria. For nearly two weeks the doctor, the parents and friends watched and worked with anxiety, but Thursday morning about three o'clock she breathed her last. They dreaded to give up any one of their children, but it seemed to be more sad to part the twins. She was two years, four months and fifteen days old."

The foregoing is a poignant story, but it is a story that should have a moral for every physician and health officer and parent in this State this coming year, and that moral is that every child under six years of age should be protected against diphtheria by being given three doses, dermically, of toxin-antitoxin, which is the preventive vaccine against diphtheria. All children over six years should have the Schick test, if they are not immune to diphtheria, should receive three doses, would be necessary to confer immunity.

There is no longer any excuse for children having diphtheria in North Carolina. It does seem that the physicians, the health officers, and the parents, with the help of the newspapers in this State, could get this story across to all the people having small children who need this protection.

This is the same old story that has adorned the pages of weekly newspapers of North Carolina for many, many years. They first thought an attack of diphtheria was a 'cold," whatever that meant. Thev therefore proceeded to rub on the neck chest of the helpless little victim some dirty stinking salve, always kept in stock in the medicine closet, or on the mantelpiece of the poor folks, always purchased at the drug store or grocery store, and always recommended for colds, no matter what a cold might mean. We have no idea that the practice will cease until the millennium is ushered in, and at that time the children will not need the assistance.

As long as dividends must be forthcoming, and commercial interests mounting into millions of dollars are concerned, there will be plenty of salves of different kinds for sale for the treatment of colds. Be it said to the credit of some of these manufacturers that they do have at the present time conscience enough to recommend on their package, their advertising matter, and on the labels of the bottle to send for a physician in cases of suspected diphtheria or pneumonia. The question is, however, How may an ignorant parent be able to distinguish the very early signs or dangers of diphtheria and pneumonia? This is especially true in the country districts where so many children live a long distance from the nearest physician and where a visit of the physician costs money, and a lot of it. To these people it is only human for them to trust and hope that the application of the salve will save the child's life.

Again the physicians have a more important duty to perform in this regard than any other class of people. The State laboratory and numerous county laboratories are available for the examination of swarbs taken from the throats in order to set up a definite diagnosis within a reasonable length of time, but, even at that, delay in the administration of antitoxin is dangerous. The laboratory report only serves to confirm the diagnosis of diphtheria, which the doctor may only have reason to suspect, but the laboratory does furnish almost totally free of charge a fresh reliable product of diphtheria antitoxin available to every physician in North Carolina. So there is no excuse for any delay in the administration of antitoxin.

But far more important to physician and parent, and certainly to the children, is the fact that toxin-antitoxin, which is for practical purposes a preventive vaccine, and not to be confused with the antitoxin, which is a serum for the cure of the disease, is available to anybody in the State, free of charge. So it is only necessary to have every child immunized against diphtheria in order to protect from such tragedies as the foregoing item describes as occurring in a North Carolina county early in December.



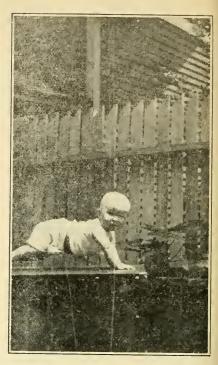
A peanut ranch in the southeastern part of the State. The stacks are peanut vines. It makes fine hay for cattle.

A DISSAPOINTED CHILD

Driving along a country road in eastern North Carolina the other day we were witness to a little occurrence which may happen any time, anywhere, and which, of course, in a way, was trivial but at the same time meant a great deal to this particular child.

We were driving along some few hundred yards behind a rural mail carrier. He had stopped at two or three boxes and we were slowly approaching him when he passed another small residence close to the road. but which bore every mark of neatness and stood out even to the casual passer-by as an unusual little roadside home. The carrier, not having any mail for this particular box at this house, naturally went on by without stopping. Coming along behind we observed a little girl, some six or eight years of age, who was evidently watching with great anticipation for the approach of the mail carrier. After the carrier passed by, the child sorrowfully made her way to the mail box, and just as we approached. removed a bunch of fall flowers from the box which she had intended for the carrier.

The look of disappointment on the child's face and her very attitude caused us to involuntarily stop our car and make the acquaintance of the little girl. We found that the child's baby brother had been ill for quite a while and the carrier's services had been requisitioned quite a number of times to bring medicines and so on from town. The family were tenant farmers, living on a big farm belonging to an absentee landowner. The mother had been ill previously in the summer, the prospects for a crop return were poor, the September storm had greatly damaged the cotton and ruined some of the later tobacco which had got wet, and altogether the



While February may not be a good month to take an outdoor sun-bath like this Rutherfordton baby is doing, it is a good time to try to get any baby to practice this kind of exercise. The pose is most unusual and indicates a baby of splendid health and strong vitality.

outlook was gloomy for the family coming winter. The father's health was none too good, and the crop was fairly heavily mortgaged for fertilizer and supplies typical of the condition of so many tenant farmers throughout that particular section. The little girl reluctantly confided that the mail carrier had been so good, and that they were unable to repay his kindness, that thought that as the hollyhocks and the half dozen or so of late dahlias, that the mother had put out in the yard early in the spring, looked so beautiful that she just knew the mail

carrier would appreciate a bouquet to carry to his own family, which could be accepted as part pay for his kindness.

Naturally the mail carrier was in blissful ignorance of any such intention and cheerfully drove on, probably congratulating himself that he could pass one box without shifting his gears and stopping, and therefore getting back home just that many seconds earlier. There could have

been no doubt but that if he had known the surprise for him in the mail box that morning that he would have been only too glad to have stopped, and there would have been a fine visit all around.

To us, or as it would have been to any other observing traveler, it was only an incidence of the day's routine; but the lesson it carries may be applied by any reader to suit his or her own philosophy of life as it exists

INTERNATIONAL CONGRESS ON MENTAL HYGIENE

First in the World to Be Held at Washington, May 5 to 10, 1930

On the above mentioned date there will be held in Washington, D. C., one of the most important international meetings to be held in the world during 1930. It has only been twenty-two years since Clifford W. Beers, who is the Secretary-General of this first great International Congress on Mental Hygiene, organized at New Haven, Connecticut, the first Mental Hygiene Society in the world. Mr. Beers some months later, early in 1909, organized the National Committee for Mental Hygiene.

Many of our readers will recall that Mr. Beers is the author of one of the most celebrated books ever published. The title of the book is "A Mind That Found Itself." This book has been run through more than fifeditions in the last years. It is the most vivid example of constructive criticism the world has seen since the Sermon on the Mount. "During the twenty that have since passed the peoples of the world have become increasingly conscious of the fundamental importance of mental health and of the fact that mental health, like physical health, may be preserved and enhanced by the giving of attention to known procedures of prevention, cure and treatment."

About twenty countries of the world

will send delegates to this meeting, including such representative nations as England, Germany, France, Japan, and others. The range of topics to be discussed at this significant meeting are as wide as the field of human relations. The topics range all the way from such subjects as the "magnitude of the mental hygiene problem as a health problem" to such topics as "possibilities in the future of human rerlationships in the light of an increasing knowledge of those factors that help and hinder the emotional, physical and intellectual development of the individual."

This meeting is sponsored by such people as the President of the United States, the Surgeon General of the United States Public Health Service, the Commissioner of the United States Bureau of Education, Harvard, Yale, and Johns Hopkins Universities, the United States Department of Interior, and many other institutions and organizations, including a number of state boards of health.

In the preliminary announcement concerning the meeting the following significant statement to public health officers everywhere is made:

"Public Health Does, and Must, Include Mental Health. The public cannot be truly healthy unless and until mental health and its conservation are given deserved attention by public health authorities, private health agencies, medical practitioners and private citizens. Man is more than a physical organism. Good Health includes good mental and emotional habits no less than good digestion, sound teeth and healthy lungs. The partly figurative, partly matter-offact, popular slogan: 'Public Health Is Purchasable,' applies to mental health no less than to physical health.''

In conclusion, as an additional illustration of the importance of the meeting, it has been announced that the transactions will be published in full in English, French, and German, the official languages of the Congress. Membership in this association may be had for five dollars, which will entitle the holder to a copy of the proceedings. Further information may be had by writing Mr. John R. Shillady, Administrative Secretary, 370 Seventh Avenue, New York.

ASTHMA

It is seldom that a day passes but what some person writes to the State Board of Health requesting information on the subject of asthma. Not long ago a writer in one of the larger cities of eastern North Carolina wrote a letter making the usual request and included some advertising matter sent out by a concern in New York state, which had free trial methods and so on, as they put it, for the control of asthma. As the questions of this writer included most of the questions usually asked with reference to this subject, we are herewith quoting some of them together with the substance of the reply of the Editor of the Bulletin. Following are some of the questions:

"Please advise me how I may be relieved, or preferably cured, asthma. I have been troubled with it seriously for the past two years. I have been treated by a physician. but I do not get much relief. I seem to be getting worse as time goes on. The attacks are so severe that at times I have to stay in bed for two or three days. After the attacks I am so weak frequently that I cannot get out of bed. Some people tell me that a change of climate will cure it others tell me that a change of climate will only give temporary relief. Should a change of climate in your estimation be advisable, please tell me what place or locality you would recommend. Do you think I could expect to be cured or only get temporary relief?"

The following embraces the substance of the answer to the foregoing request:

People generally associate disease called asthma with various conditions which physicians term as asthmatic. The two terms naturally indicate different conditions. A person may be asthmatic from many different causes. The term asthma ought to be limited to the specific disease itself, which is a periodic attack of bronchial spasm. There are such variations as cardiac asthma, caused by disease of the heart; renal asthma, relating to kidney diseases; and so on.

True asthma is sometimes due to ear, nose, or throat troubles, or chronic bronchitis. It frequently occurs with acute irritation of the membranes of the upper respiratory tract. This is the case when it is caused by irritation from pollen or dust particles or drug irritants. Genuine asthma gives more trouble to the patient suffering from it at night than it does any other time. Sometimes the suffering continues all night, and occasionally an attack will last sever-

al days, giving trouble day and night. Such is the case not infrequently in spite of all efforts at medical treatment. Even though the attack be controlled with powerful drugs, in such cases it recurs when the effect of the drug has worn off. During the last few years the opinion has been advanced in scientific circles that nearly all types of true asthma are due to some type of hypersensitiveness or anaphylaxis.

The best thing for a patient suffering from asthma to do is to have a thoroughly competent physician carry through a systematic examination. This should begin, of course, with the nose and throat and teeth. There should be an X-ray examination in order to determine the condition at the roots of the teeth as well as the condition of the pituitary glands and other such structures. The examination should include the structures of the body in order to locate any source of absorption of toxic material from any other affected areas, such as the gall-bladder, appendix, and so on. The discharges from the nose and throat should be examined, microscopically. The feces and urine should be examined. There several complete outfits material on the market suitable for making skin tests in order to locate any particular kind of food or bacterial protein as well as pollens from different flowers which may cause the attacks. All of these should be carefully applied. truth is, the chronic sufferer from asthma should receive about as thorough and exhaustive examination as a patient could possibly be expected to stand on account of trouble from any disease or diseased condition. Careful and minute examination into the diet of the person should be made. Frequently some item of diet is the sole cause of asthmatic attacks. The examination for the exciting cause, which may reside in the pollens or

food substances, is for the purpose of finding out what the physicians used to commonly term the idiosyncrasy of the patient toward any of the suspected causes. Sometimes the feathers used in a pillow may contain the exciting cause.

A story has recently been going the rounds in medical circles of a young man who lived in Washington, who had a pet parrot. He was devoted to his parrot, but he suffered such agonizing attacks from asthma at periodic intervals that in one of the attacks he was so sick that his family moved him, carrying out an order for change of climate, and he was too sick to take the parrot along. Lo and behold, in forty-eight hours after he reached his destination, with the parrot left behind, the attack ceased, and he was soon as well as he ever was. He remained well and all right until he returned home. Naturally he was glad to see the parrot and the parrot was glad to see him. when he got back home. another violent recurrence of the asthma followed. Finally was directed at the parrot, with the result that on permanent separation of the patient from his parrot no more attacks of asthma occurred.

Such occurrences are very common. Particles such as dandruff from horses sometimes cause violent attacks, and so on.

It is probably true of no other disease as much so as asthma that the important thing of all things to do is to locate the cause of the attack. When the cause is known it is generally easy to effect a cure; but unless the cause is definitely established any treatment instituted is a haphazard proposition. If the cause is found to reside in chronic disease of the upper air passages, naturally it may be very hard to eliminate the cause. In such cases only palliative treatment, tiding the patient over the peri-

odic attacks, is about all that can be accomplished.

Hay fever and asthma are generally regarded as being due to the same cause when the asthmatic attacks occur only at certain periods of the year, just as in the case of periodic hay fever. The preventive treatment under such cases of both conditions is the same—find the cause and remove it, or get away from it.

For patients who cannot be cured

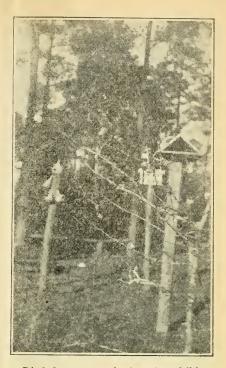
permanently physicians are prepared to prescribe the best treatment possible, which, however, can only obtain through a careful study of each individual patient by a competent doctor. We will leave it, however, to the physician who is called on to treat such patients to utilize his own treatment after he makes his own examination, because if we were to recommend a treatment as specific for one patient it might not work in the opposite direction for another patient.

STARVING IN A LAND AS FERTILE AS THE NILE

As a boy the Editor of the Health Bulletin spent many years on North Carolina farm. Before he was twelve years of age he had become thoroughly impressed with the slipshod methods prevailing in his community among the people, a majority of whom failed to provide themselves with the necessary food and feedstuff for their families and what little live stock they had. In those days North Carolina had what was known open range territory. The farmers had, as a rule, a few hogs, and a few cattle--an exceptional one now and then having some sheep, but that was rare-and a few goats. The whole scrub outfit roamed the ranges for food, especially in summer. In the spring the pigs were caught and a mark put in their ears, so each farmer would know his stock in the fall. The yearling cattle was treated in the same way, and then when frost occurred and the grazing became lean, the hogs that the cholera had not killed and the cows that the ticks had not eaten up would straggle back to some of the farms. After some confusion each farmer could locate his own property, if such measly animals could be called property. The stock was then turned in the little fields and fattened up, and the hogs utilized as meat for two or or three winter months. In the summer the whole dependence would go back to western sow belly, shipped in by freight from Minnesota or Iowa. In addition to the little cotton, and in some instances tobacco, production, the farmers largely depended on tar, pitch, and turpentine for what little money they had. The turpentine was exchanged for flour, also from Minnesota; more western meat, and molasses from Louisiana, shipped in via Wilmington. The one saving feature of the whole enterprise was that game was rather plentiful, partridges, squirrels, and rabbits being available any time in the year, and this afforded a little variation in the ordinary monotonous diets. It is hardly necessary to say that this regime was not depended on by the better class, or at least the financially better off class, of farmers, but a large majority of the small landowners and all of the tenants depended on such a schedule. In many of the plantation homes year-round gardens, orchards, milk and butter, and the best of food was available, but such families were rather the exception.

Our observation has been in recent years that the situation along this line has grown worse with time. The State Board of Health, through its various health department affiliations in the different counties, and through the literature that it has been

sending out for more than twenty years, has constantly agitated for health reasons, if for no other, the necessity of a garden and diversified food for every family. Early in December appeals were going out in different sections of the State, especially the eastern part of North Carolina, literally begging for help for hundreds and even thousands of peoplemen, women, and children - faced with literal starvation before other crop can rescue them. This whole section from which these cries are arising in increasing volume is as fertile as the Valley of the Nile in its palmiest times. As much garden and truck produce could be raised in any one county in that section as the people of all the whole State of North Carolina could consume nually, if only the efforts could be made. It is a section where a yearround garden is possible, as proved by individuals here and there all over the territory. It is one of the finest countries in the United States for stock raising, especially for hogs. The agriculture departments of the State and Federal Government have made possible the raising of tick-free cattle. Hog cholera is no longer a menace, thanks to the activities of animal industry department of the State Government, and yet, owing to a fool policy of raising only so-called money crops, these people face starvation year after year when there is a failure of crops due to adverse weather or market conditions. writer regards the chief trouble as being a dog-eat-dog policy on the part of the landlord and tenant alike. in which the landlord exacts the last drop of blood in the way of tobacco and cotton acreage, and in which the tenant reciprocates by demanding all the credit at the time store that he can possibly get, each one gambling at the expense of the other. If the landlord would demand that his tenant have chickens, hogs, and cattle,



Bird houses made by the children in a two teacher school. The tree is "The Birds Christmas Tree." It has pop corn and suet on it. The children put it up just before Xmas, and do each year. Sunken in the ground, at the foot of the poles holding the bird houses, is an old stove bottom for the Birds Bath. All these bird houses are occupied this year. It is a very interesting place. If you happen to be traveling on Route 20 in the southeastern part of the State, you may see it from the highway in the grove of pines beside the schoolhouse.

and a garden before a single acre of tobacco or cotton should be planted, and then if he should demand in his contract with the tenant that this garden must be kept up the year round, that the hogs and the cattle must be cared for properly, and all the supplies grown at home, there would be fewer and fewer cries going out to the general public for help.

It is nothing short of a suicidal policy which the Agricultural Depart-

ment and the Health Department have failed so far to prevent. Twenty years ago we excused ourselves for on these delinquencies largely ground that our population had been so greatly infected with hookworm and malaria, especially our farming and tenant population, that they were unable physically to do the work necessary to raise their food supplies and otherwise arrange an intelligent living schedule for themselves. Before that period, and very properly, we attributed a large part of our delinquencies to the devastating effects of the Civil War. This was undoubtedly true. The best blood in the State was left on the battle field, and the widows and orphans of these fighting men were not only left to procure food under the most adverse circumstances, but the whole section had to fight an economic policy, saddled upon us by the victorious which it took fully a generation to overcome. This writer would be the last to blame the acute sufferers of the Civil War for apparent shortcomings in anything. He would also be slow to blame the poorer class of the population afflicted with worm and malaria for so many years, but there is no excuse now-a-days for any human being having hookworm or malaria. Safeguards provided for every individual, free of charge, who cares to avail himself of the protection offered by health agencies in North Carolina. seems to us that it comes down now to a matter of sheer laziness and selfishness and indifference to the needs of our own families, and our own communities.

If we are ever to shake off the situation as now exists it is time we begin. The month of February has always been the period in this State for starting a garden. There is no better time than right now to go out and stake off and plow up a garden plat sufficient to afford all the vegetables



This particular bird house has four rooms. It was made by a small boy whose father told him he would give him five dollars for every bird who built a nest in it. When the school nurse was there the teacher told her each room was occupied; but the father had not paid. He had no idea the birds would use it when he said this

necessary for the whole family from now to the thirty-first day of December. There is no better time than now to procure a good milk cow and to feed and care for that cow, and to produce enough milk and butter for the entire family to the end of the year. There is also no better time than now to start a bunch of pigs on the road to pork for the December smokehouse. When these things done, it will be ample time to lay off the acreage perhaps for tobacco and cotton. Then if the Agricultural Department warnings are listened to, and if the acreage in either is not excessive, and if the protection which modern science affords against the boll weevil is practiced, regardless of weather, rains, or doughts, a fair crop may be expected, and if living supplies are produced, and not bought at a credit store, there may be some money for the family next December. However, if there is little or no money forthcoming, if the family has milk, butter, eggs, chickens, and pork, together with all kind of vegetables raised in the garden, there will be no appeals to the public to feed the starving people in the garden spot of the United States next December.

PROJECT ABOUT DIPHTHERIA AT THE NORTH CAROLINA COLLEGE FOR WOMEN

Division of Hygiene Puts on Interesting Study About Diphtheria Prevention

The Division of Hygiene in the North Carolina College for Women at Greensboro, headed by Dr. Annie O'Donnell, several months ago decided to cooperate with the State Board of Health in its efforts to spread the knowledge about diphtheria control to as many people in the State as possible. In order to help in a practical way, Dr. O'Donnell decided to carry on some special studies in her classes in the Division of Hygiene with especial reference to the prevention of diphtheria among the families and friends of the students in her classes. As these students come from practically every county of the State, it may be readily seen that the idea is a practical one.

Doctor O'Donnell has submitted to us four of the best letters received during this project and we are glad to publish them below. All of the letters are very interesting. All of them have some nice stories to tell their little friends to whom they are writing, and all of them are short and to the point. Such efforts as this will aid greatly in the dissemination knowledge about the prevention of diphtheria, and hasten the time when the disease will be a matter of history in this State. We are first publishing a short descriptive sketch of Dr. O'-Donnell describing the methods adopted in undertaking the study in her class. Following is the statement by Dr. O'Donnell describing the project: "As the North Carolina State Board of Health is putting on a campaign to have all pre-school children in the state immunized against diphtheria before the end of the year it was decided to have the students in the Hygiene II classes at N. C. C. W. help by a project which will be described.

"Each student was asked to write a letter to some child in her family or to a friend between the ages of one and five years explaining what the toxin-antitoxin meant in such a way that it would appeal to the child. Also, to give the parents the information needed, and the incentive to have their children given the inocurequired for immunization. These letters were carefully read by the members of the department, and those which follow were the ones selected as the best of their particular type of the more than four hundred written and mailed to that number of children in the state. In each letter there was enclosed a TRAIN TICKET TO NO-DIPHTHERIA-TOWN which had been generously supplied to us by the Metropolitan Life Insurance Company.

"Before the end of the college year replies to several letters had been received stating that the children had already taken their first inoculation. Some of these tickets when completed will be delivered to the local Parent-Teachers organization."

Following are the letters written by the four members of the class, published exactly as they wrote them: "Dear Welbon:

"I'm sending you something. It's a ticket for you to take a trip on. I'm going to tell you about that trip, but first I want to tell you something else.

"Once when I was a little girl about five years old, I was sick. O! very sick. The doctor came and looked at me and looked at my throat, and said I had diphtheria. When you have diphtheria it's because a germ, a little thing not as big as the tiniest little black speck you ever saw gets into your nose or your throat and makes it sore. Then it hurts, and it gets worse and worse. It's all because of that little germ. Mother said I had to get the germ from somebody else, and that she knew I hadn't been near anybody that had diphtheria. The funny thing is that though you can get a germ from some people that don't even have the disease, and are not even sick. They just carry germs around in throats and give them to little boys and girls by sneezing or coughing or anything like that. I s'pose I got my germ from somebody like that. About three days after I got sick, my twin sister, you know, she is just as old as I am, got sick too, and the doctor said she had diphtheria. Nobody else in our house took the diphtheria, but my sister and I were very sick for a long time. When we got well couldn't talk. Honest, she couldn't say one word. We were all so sorry, but we didn't know what to do. But not long after that Daddy took us to Augusta to a big doctor, and he made Lily talk, and O! how glad we were.

"The best thing is that now the doctors have found something that they call toxin-antitoxin. They give it to little boys and girls three times,

and then—then, they won't ever have diphtheria, if that old germ does get in their throat! İsn't that fine? That's just what I want you to do with this ticket I'm sending you. Get your mother to read you about what is on the ticket, and take this trip and then you won't ever, ever have old diphtheria. Up here at school·we're sending a ticket to lots of boys and girls everywhere so they can take a trip, and afterwards never have diphtheria. Don't you want to go? Hooray, for the big trip!

Best wishes, Cliff Dolvin."

"Dear Margaret Rae:

"Aren't you surprised to hear from me? You see, I have some special news to tell men that I thought I should write to you right now, and not wait to be I you this summer.

"Do you remember the times I used to tell you and Jack and Johnnie and Walter Bright about Brer Rabbit and the Tar Baby? Well, I have just learned a new story, but this one is no fairy story. It is about a little bug, called a germ, which gets in little children's throats and makes them sick. The other day in Hygiene class I studied about this bad little bug, and my teacher gave me a ticket to No-Diphtheria-Land and told me to send it to some little boy or girl whom I knew. Of course, I wanted to send mine to you, and that is what I am doing right now.

"This ticket to No-Diphtheria-Land will take you on a nice trip, and will keep this bad little bug away from you. You should take this ticket to a doctor and he will just put some toxin-antitoxin in your arm. That is an awfully big word, but it isn't half as bad as it sounds. You go to the doctor three times, and then after about six months you have a little test, called the Schick test; and no fooling, Margaret Rae, you will never run into that bad little bug.

"I think this is a good plan, and I

know that you will think it is, too. When I come home this summer I want you to tell me if you have used this ticket. And you will have to hurry because I'll soon be home. Will you be glad to see me? I'll be glad to see you.

"Here's hoping you have a grand time on your trip to No-Diphtheria-Land.

Lovingly,
Florence."

"Dear Betty Frances:

"As a project of the Hygiene class, each girl is writing a letter to some little child between the age of one and six about the disease, diphtheria. I thought I would send my letter to the little girl I like best.

"We are trying to keep little girls and boys of your and Dickie's age from having diphtheria. This disease is dangerous at your age, and that is when most people have it. I want you to be able to say that you are helping the N. C. College Hygiene class to fight against it. If you have not already taken the toxin-antitoxin, I want you to take it, for it keeps people from taking the disease. Tell your little friends about this awful disease and perhaps they will follow your example, and take the treatment. If every little girl and boy were to take the toxin-antitoxin there would not be any more diphtheria.

"I am sending you a ticket which enables you to get the toxin-antitoxin. Don't let it go to waste. If you have already had the treatment give it to Dickie or to one of your little playmates for it may keep some one from having diphtheria. Now, I am expecting you to help fight against this disease.

Yours sincerely,

Elizabeth."

"Dear Tommy:

"How would you like to go on a nice trip? I believe you'd like it so I

am sending you a ticket for one. You can get mother to read it to you, and you can start just as soon as she'll take you to the starting place. You must tell her how much you want to go and then I'm sure she'll let you. This trip is to No-Diphtheria-Town, and you travel to it by the road of Toxin-Antitoxin. Some of these words are pretty long for a five year old boy, so I'll try to explain them.

"First of all diphtheria is something that makes you sick. I know you don't like that because when you're sick you can't play or do anything but stay in bed and hurt. So, of course, you don't want diphtheria. It's caused by germs and they're so small that you could put a thousand of them on one of your freckles, and they wouldn't even cover it. Of course, if they're that tiny, you can see that you can't just swat them like you would a fly or a mosquito. You have to fight them some other way, and that's what Toxin-Antitoxin is for.

"You remember sticking one of mother's needles in your finger once, don't you? You were very brave and didn't even cry. You tried to tell us that it didn't hurt muck-remember? Well, when you take the Toxin-Antitoxin it's a lot like that. It only hurts a little and that's over so quickly that you don't even mind. The Schick test is like that too. It's just to see if you're liable to have diphtheria at all, and maybe after you take it, you won't even have to take the other. But even if you do, I know you won't mind because you are such a brave boy. It will be an adventure like mother reads you in your story books, and you will be the hero on a voyage to No-Diphtheria-Town! Doesn't it sound nice? You must get mother to write and tell me when you start on your trip. I shall be waiting for news of you!

> Your friend, Louise."

PULLING AT YOUR HEART STRINGS

By

SUDIE E. PYATT

That was what thin, dirty, ill-kept little children always did to Mary Parker, pulled at her heart strings. She was 35, big, awkward and colorless. Mary had never married, but a child's small face, anyone's child, and a child's small fingers always touched Mary's heart as nothing else in the world had ever been able to do.

Mary's never marrying had cheated some little child, possibly a number of little children, out of a good mother.

She left her sister, Louise's small flat with a frown on her usually placid face. Louise's six children, her nieces and nephews, were wrapping their small fingers about her heart, and it was hurting.

Louise's children did not look well, and Mary knew at a glance that Louise was not giving them the care and attention they should have.

Six children, all under 12, living in a four-room flat with two grown-ups? Why that was terrible!

Walter, Louise's husband, had been full of plans, what he was going to do when he became well established in his new job as pressman at the Ferrell Printing Company. Mary had heard Walter talk before, and she did not have much confidence in what he said. It was funny, too, that Louise and Walter could not live and take care of their children as they should on what he made.

There were eight in the family, but many a family of six children had been reared on less than Walter made as a printing pressman. Perhaps it was poor management. Louise had been married at 18, and Mary never had credited her brother-in-law with having much managerial ability.

Though when her sister wrote her

that he was out of a job she had been instrumental in securing the vacant pressman's place for him at the printery where she was forelady of the bindery.

Hurrying to the snug little home she and her mother shared together Mary continued to grumble to herself about Louise's children. Their thin, carelessly and not too cleanly clothed little bodies stuffed into the close, untidy apartment, would have worried her no matter whose children they were. Being her own blood kin the worry was intensified many times.

Couples who brought children into the world as Louise and Walter had ought to see that once the youngsters were here they had a fair chance, an even break.

Goodness knows life was tough enough when one faced it physically strong and well. If one had to begin before one had gotten to be many days old with only half a chance? Why the poor kiddies were licked before they had an opportunity to show the world what they could do.

Mary surprised her mother on her return from her visit to her sister's that night by talking more about children's rights to the proper sort of bringing up than she talked about Louise and Louise's brood of badly cared for youngsters.

"Every child has a right to a square health deal from its parents, and if they won't give it to him it is up to the state to see that it has it." Mary picked up the evening paper that had slipped from her mother's lap, as she spoke.

Mother Parker, on the other side of the pottery electric lamp in the center of the living-room table, nodded her head in agreement, looking at Mary fondly over the top of her glasses:

"You, big old girl, Mary, you're not trying to say I didn't give you

the proper chance?"

"No," Mary laughed. "I've always been healthy enough, and so have you, Mother. Even Louise has had good health all through six pregnancies and childbirths in thirteen years. It's the health of the third generation in this family I'm worrying about. If Louise and Walter don't take better care of those youngsters of theirs there won't be one of them that will be able to do the work the grown-up members of the family are doing now, if they live to be grown-up men and women."

"I'm worried about the children, too, Mary," Mrs. Parker said slowly. "I offered to bring Bud and Loris out here for awhile until the baby stops causing Louise so much trouble, but she wouldn't hear of it. Said Walter wouldn't like the children to be out here."

Mary's eyes fell down to the headlines of the evening paper:

"CHILDREN'S HEALTH CLINICS CONDUCTED BY HEALTH DEPT. ARE WELL ATTENDED IN CITY"

She read slowly; then the smaller deck:

"News Reporter Visits Health
Department Clinic This
Morning; Secures Interesting Story

THREE CLINICS IN THE CITY"

From the article Mary learned that the clinics were for children from the age of birth to twelve years. They were conducted from 9 until 12 three days a week, Monday, Wednesday and Friday at three centers in the city.

Mary made a note of the days, the hours, and the clinic that was nearest her home. If she could not get Louise to take the children to the clinic she was going to take them herself.

The city was trying to do its share to give its youngsters a square health deal. It was most certainly up to the fathers and mothers, and if not the fathers and mothers, old maid aunts to see that the children had an opportunity to get all that was coming to them from the city.

The next morning at the printery Walter was very sweet to Mary. So sweet that she grew.suspicious. Before the day was done her suspicions were justified. Walter asked her to loan him \$150 to have the children examined, and their tonsils taken out, he explained.

Mary was more suspicious now than she had been before. Walter explained what he wished the money for. He was not accustomed to thinking of his children's health conditions. He must be planning to use the money for some other purpose, covering his real motive in trying to borrow the money with the children.

"What doctor are you going to have make the examinations?" Mary queried.

"Uh-ah-er, —Doctor—!" Walter floundered.

"Walter, you don't want to take the children to the doctor. You want the money for something else. Mary faced her brother-in-law squarely."

"Nice aunt, you are, not to help your own little nieces and nephews!" Walter sneered.

"I'm willing to help all that is needed, but I'm not satisfied to give you money to spend for everything but the children. Have what medical attention for the children is needed, and when the doctor presents the bill I'll help you pay it, but I won't give you a cent, Walter."

"That's all I want to know about you," Walter sulked.

Before the day was over Mary found that Walter wanted the money to make a first payment on a car, and not for the children at all. Louise was as anxious for the car as he was. They were more interested in a new car than they were their children's health.

"Mother, we'll have to fix up the children and take them to one of the health clinics I was reading about last night," Mary said, when their next-door neighbor stopped telling of Walter's and Louise's visit to his automobile agency for a car that day.

"Tomorrow is the day for the next clinic, 9 to 11, at the Wylie school," Mrs. Parker consulted the day-old paper.

"All right, mother, I'll telephone the manager in the morning that I'll be out for half a day. The children won't be in school, because Louise and Walter have not entered them yet. We'll take the car, go down, bundle them all in, and take them along. We'll carry Louise if she'll go. If she won't we'll take the children without her."

The nurse at the Wylie school, city health clinic, next morning looked down a row of five youngsters and a baby in arms, that were brought to her desk by a determined looking, youngish woman, who might or might not be their mother, and an older woman who must be their grandmother.

They had never been to the clinic before the nurse was sure. She took out the registry cards, and began taking the children's histories immediately. The youngish looking woman was not the children's mother she soon learned.

In the children's histories she secured their names, fathers and mother's name; date of birth, weight at birth, whether or not the child had come to normal birth at nine months, who the physician was that attended the mother and each of the six children; the pre-nantal care of the children's mother before each child was

born. Then there were questions as to how the baby got along after arrival, and others covering their school records.

What Mrs. Parker did not know about her daughter's children, Mary apparently did, and the questions were all answered satisfactorily.

After the children had been carefully registered, given a number and a card upon which progress was to be noted at future clinics, they were all weighed and measured. Then wrapped in sheets they waited the coming of the doctor for a physical examination.

The physician in charge of the clinic, Dr. Harold George, examined with his stethoscope each of the children's lungs, heart and general interior. He examined each child's tummy, and satisfied with the young per-



A homemade trapeze and a little native acrobat performing in a southeastern North Carolina rural school.

son's interior, he turned it over to see how things were progressing in the posterior regions of the future citizen by the name of Winton.

With the aid of a flashlight each child's mouth, throat, and the condition of hair, scalp and ears were carefully looked in to.

Mary and her mother stood by interested onlookers as the doctor went about the examining of the six children.

"The mother of these children should be here," he said when the examinations of the six were completed. "I can tell you two women what is wrong with the children, and what should be done, but the mother will be responsible for carrying out my instructions."

"Tell Mother and I what should be done," Mary spoke quickly. "We are going to see that these children have the right kind of health chance."

"You mean you are going to take care of the children yourselves?" the doctor asked.

"Yes, until Walter and Louise learn that children aren't to be treated like little pigs, but as young humans, future citizens."

"Well, I'd like to see more aunts and grandmothers of children who aren't getting the proper health breaks take the stand you and your mother are," the doctor said, as he rescued his stethoscope from Bud, who was finding it a most interesting plaything.

The report the nurse gave Mary and her mother as they were preparing to leave the clinic showed that Blanche, 11, was underweight, pronouncedly so. She should be watched, the nurse said, for any possible symptoms of childhood tuberculosis.

Junior, 10, had bad tonsils. His weight was not normal, but he was not as much underweight as Blanche was. He needed a tonsil operation at once, as he had recently had an abscess on the left tonsil.

Lucile, 8, had definite symptoms of a bad heart. Her weight was also not what it should be. She needed rest, quiet, cleanliness and good food.

The teeth of Loris, 7, were her worst trouble. They needed the attention of a good dentist, badly, and Loris should be introduced to a toothbrush and taught how to use it without delay. Loris was not the only only of the children whose mouth needed the services of a toothbrush and a good dentrifice, but she was the one of the children whose teeth had suffered most from a lack of dental care and mouth cleanliness.

More nourishing food, bath and clean, comfortable clothes were Bud's needs.

Marian, the baby, 9 months, needed spinach, orange juice, and lactic acid milk fed in clean vessels at regular hours.

The proper care of children was simple, the nurse and doctor both stated. The main thing was to know the simple fundamental principles for the proper care of children, and then carry these principles out every hour of every day from the birth of the child until it became an adult man or woman, no longer under the care of the father and mother.

A typewritten sheet with five simple, but indispensable rules for the health and happiness of children was given Mary and Mrs. Parker before they left the clinic.

These were the five rules:

- 1. Cleanliness, plenty of soap, water, baths, and thrice daily brushings for teeth.
- 2. Fresh air, sunshine, clean, airy surroundings in the home and at play.
- 3. Warm, comfortable clothes for winter.
- 4. Cleanliness, and not too many clothes for summer.
- 5. Nourishing food at regular hours, cereals, vegetables, milk, fruit.
 "Freedom from preventable dis-

eases, medical care, and the remedying of defects are due every child" was printed beneath the five rules in big black letters.

And immediately under that:

"Every child has a right to a square health deal from its parents. If its parents won't give it to him it is up to the state or the municipality to see that it has it."

Six, clean, happy, well-fed youngsters went to bed in the two spare rooms at the Parker home that night.

Walter had not been at work in the afternoon when Mary reported for duty at the printery, and calls at the Winton apartment until the children were all put to bed at nine were met with central's 'Sorry," but 42-J does not answer."

Finally Mary and Mrs. Parker stopped worrying about whether Walter and Louise knew where the children were. The children did not worry at all. It was one of the few times when they had all been at their grandmother's, and the excitement of the visit and the good things she gave them to eat, would either of them have banished all worry from their childish heads.

"Gee!" Junior said, as he ate his second piece of apple pie, "I'll soon be big enough to beat Himmie Jones if I eat this much every night."

The Winton children were beginning to get a fair break—a real chance, and they did not pull Mary's heart strings in quite the way they had.

Saturday morning Walter was at work. He did not mind at all that the children had spent the night with Mary and his mother-in-law. Indeed, he said that he and Louise had expected that, and had gone off to a dance in a car a friend had loaned them, because they did not have to bother with the children.

"Wish you'd keep them over Sunday," Walter suggested casually. "Louise and I want to go to the movies tonight, and it's no fun to drag a bunch of kids along."

"How would you like Mother and I to keep the children?" Mary looked at her brother-in-law, questioningly.

"Keep them? Why you can't do that? They're my children, mine and Louise's."

"Yes, they're your children, all right," Mary admitted Walter's point, "but you and Louise are darned poor parents. Mother and I have decided to keep the children until you and Louise get a more suitable place for them than that four-room flat, and until you learn what it really means to be the parents of six children."

"Parents of six children!" Walter looked at Mary in disdain. "What do you know of being a father or mother. If you feel that way about it I'll bring the children home today."

Walter strode angrily to the door. Mary stepped determinedly in front of him. "Those children are going to stay with mother and myself until you and Louise turn over a new leaf in the book of being parents."

"We'll see about that!" Walter thrust Mary aside, and strode on out of the printery.

The Winton children did stay with their grandmother Parker and their Aunt Mary until their father and mother had made better preparations for their care.

At the dance Louise attended the first Friday night the children spent away from home she developed a cold that soon became a serious case of pneumonia, and Mary had to hire a private nurse to care for her, because she could not leave her work to care for her sister, herself.

During Louise's illness and convalescence she had time—for the first time since Blanche had been born eleven and one-half years before to miss her children, and to realize what they meant to her and to Walter.

Allowed up and around the apart-

ment Louise missed the children more than she had while ill in bed. third day she was up she had a long talk with Walter, one of the most serious talks they had had in their thirteen years of married life, and the next day, with the doctor's permission, Louise and Walter went looking for a house. A house that was not too close in town, with sunny, airy rooms, a garden where vegetables could be raised, and chickens kept to help supplement Walter's pay envelope in providing food for the six young mouths, and enough playground for the children, so it would not be necessary for them to play on the sidewalks, and in the street.

The house was found, at a figure not much higher than that they were paying for the four-rom apartment. The furniture from the apartment moved in to the new house, and some good, substantial pieces bought second-hand furnished the new home comfortably.

Mary and Mrs. Parker were asked out to inspect the new house, and the next day the six children went reluctantly back to their parents.

"You've taught me a lesson, Mary," Louise said as her sister kissed Blanche and Loris goodbye. "I'm going to take such good care of the children now, be such a good mother to them, they will never want to leave me again to see anyone, not even you and mother."

PREVENTIVE MEDICINE AS APPPLIED TO THE INDIVIDUAL

By

THOMAS A. MANN, M. D.

Present knowledge of medical science and its application to the body politic are not coextensive. The average length of human life is now about fifty-six years. If all the people could receive the benefits of modern medical knowledge it is safe to say the average length of life would be at least seventy years. To add fourteen years to the average life limit would mean an economic saving of so many billion dollars that it is hard to estimate. Changes in the application of medical science are slow and are marked by the opposition of those who like to follow the beaten paths. Knowledge of disease prevention, however, is bound to be one of the biggest factors in leading to a more economic application of medicine.

We may classify medicine thus: 1st Research medicine; 2nd Curative medicine; 3rd Preventive medicine. The first two we shall not discuss. Preventive medicine can be divided into two distinct fields. The first deals with community measures and is controlled by our health departments, national, state and local. These departments are efficient in proportion to public financial support and to the standard of the personnels.

The second field deals with the individual and the medical profession and at the present time must be applied principally on the same financial plan as curative medicine. Its value depends on the efficiency of the specialist in preventive measures and cooperation on the part of the public. Medicine is gradually evolving into a system whereby the individual will be advised before he becomes incapacitated by sickness. The wise

father and mother will soon carry their children to the specialist who will not only immunize them against such diseases as typhoid fever, diphtheria, whooping cough, and scarlet fever, but who will through periodic examinations and frequent inspections keep tab on their physical condition and have teeth, tonsils and adenoids or any physical defect remedied before serious damage is done. The specialist will be a nutrition expert and will advise concerning the children's diet and exercise.

While the physical mechanism seems to be very adaptable in extracting and assimulating its food requisites, there is no doubt that the nearer one approaches the scientifically balanced diet the more vigorous will be his state of health. The excretory organs are spared undue labor, resistance to disease is increased and the outcome is a longer, healthier life.

Not only will parents seek advice to prevent sickness among their children and try to furnish condition under which they may develop and lead to a vigorous state of health. The working man and woman will be checked periodically to see if the kidneys, heart, arteries and lungs are functioning properly.

Many serious conditions affecting the human organism are in their incipiency so trivial and seemingly so unimportant that consulting a physician would not be deemed necessary. Progress of the disease, however, is slow but sure and where aid is finally sought it is too late to save. Cancer is at present such a condition and in dealing with it we are reminded of the old quotation, "The mills of the gods grind slowly but they grind exceedingly fine."

Of course we can not dream of the day when the clinician will not be needed, and our medical colleges will continue to turn out medical doctors, but there will be more and more at-



A close up of a baby long leaf pine in southeastern North Carolina.

tention paid to preventive measures and among the specialists we will soon find the practitioner of preventive medicine.

So much is now known about the value of prenatal care and the value of proper diet and regulation of life for the prospective mother that women in all walks of life will soon put themselves in the hands of the professional adviser so their offspring will have the best chance to be born in the most vigorous state of physical perfection. After birth the life of both mother and child will be carefully supervised to prevent sickness.

A word of caution in regard to the consultant may be advisable here. Not every person with a "doctor" attached to his name is well qualified to advise concerning the prevention of disease. Special study is required to be able to advise as to

energy value and quantity of food to be taken. Skill in detecting danger signals in physical defects and ability to supervise muscular exercise are all necessary. While many medical men are prepared to give excellent advice both in clinical and preventive medicine there are some who have confined their study almost entirely to curative methods and are handicapped when called upon to give reliable advice to keep well. It is better to select an adviser who specializes in preventive measures rather than to call without discrimination any doctor.

OUT OF DATE

The mistrial in the Gastonia case caused by the mental breakdown of one of the jurors is a glaring example of the dismal inadequacy of the American system of criminal justice and the failure of the law to keep up with social progress. It goes far to bear out Dean Roscoe Pound's theory regarding the anachronistic character of the American law structure as a factor in explanation of this inadequacy. He said cogently at a recent convention of psychiatrists, things in law depend on the way those who framed the laws and those for whom they were framed were raised. When those for whom they were framed were raised in one way and those to whom in the later generations they must be applied were raised in another, we are on the way to one of the crises which mark course of legal history."

The Charlotte episode, reflecting on our methods of selecting juries, illustrates pointedly the truth of this statement. The jury system in present form may have answered the purpose of justice in the early days of American life, but it is patently unequal to the needs of the present time. Under the simpler conditions of a century ago we had juries were perforce more intelligent cause they were composed of men of similar mental calibre to those involved in the litigation before them. Today there is usually a wide gap between the mental make-up of the litigants and their "peers," the jury. It is precisely the complexity of present day living which, in Dean Pound's opinion, calls for a different law system, that is responsible for the progressive deterioration in quality of our juries. The lawyer has kept up with modern progress, but the law has not; a condition the lawyer has been quick to take advantage of, at the expense of justice and the commonweal.

The issues growing out of our economic, political and social life that are required to be settled in courts of law today are no longer so simple as those our forefathers were confronted with in an earlier era. Human behavior has itself become more complex because of these changed conditions. Violations of the law are not so easily determined in our present intricate industrial life as they were in the agricultural community of a hundred years ago. As a result, our courts need not only a more adequate organic law and more modern legal and judicial machinery to administer this law, but they need every help they can get from other fields of knowledge than their own that have bearing upon the problems before them.

Not the least of these helps can come from the growing body of know-ledge possessed by psychiatry and the new psychology, the disciples concerned particularly with problems that are among the most difficult the courts have to deal with, namely, problems in human behavior. This is not to suggest that juries be composed of psychiatrists, psychologists,

or other experts, nor even that every juror be examined by such experts before he is impaneled. It is merely point out the greatest usefulness of a service that psychiatry and psychology can render in helping judges to better understand problems in which human elements are determining factors and to more finely balance the scales of justice. Human conduct is a pivotal factor in every case that comes before them and unless they be as wise as Solomon they must look to others to supplement their know-

ledge in various particulars. Psychiatry is called upon to determine the mental condition of persons accused of crime concerning whom the question of sanity is raised. It is coming to be employed more and more in the disposition and treatment of convicted offenders. It has been used to determine the veracity of witnesses as to facts. It can certainly help in selecting better juries. It can do a great deal, even with its present knowledge, to help make American justice more efficient—National Mental Hygiene Bulletin.

THE VENEREAL MENACE

By

W. W. CRAVEN, M. D.

(Read at the 1929 Annual Meeting of the Medical Society of the State of North Carolina)

One after another of the agencies that have retarded the fuller and more satisfactory development of society have come under the condemnation of the masses, and efforts more or less successful have been aimed at their suppression or eradication. After centuries of uncurbed rampage the rum demon became intolerable and society has taken a stand, rather feeble though it be, against it.

Then the fight against opium and its derivatives and its path across time is being made much more difficult than it once was. Today an effort is being made to cause a recession of the automobile speed menace, perpetuated by the reckless demon loaded with "fire water" or perhaps only with the spirit of the "killer." Finally it is becoming noticeable that public attention is becoming more or less directed towards the so-called social disease, gonorrhea and syphilis. Today America never before is faced with the momentous question of how best to control these two diseases to say nothing

of the swath being cut by the bacillus of Ducre. Unless there is a slackening of the inroads made by these diseases on the human economy there will be results far more disastrous in the future to all races than has been the case in the past. The exact origin of these social diseases as to time and place is not known, but it is probable that the people of the early dawn of history were familiar with them. Chapter XV in Chronicles of our Bible refers to an ailment whose symptomatology as recorded in very suggestive of gonorrhea. In the present era with so many means of rapid transportation the matter of limiting prostitution is a greater problem then ever. The isolation and cure of those infected seems to be an ideal well nigh unattainable. In times past when population was not shifting drifting as it is today there was far less chance for rapid and widespread dissemination of venereal disease. Before the Civil War and for many years thereafter, notably in the case of the colored race, there was little

change of residence and these diseases were rarely encountered. In Africa among the native blacks we are told by medical missionaries the social diseases were unknown prior to the advent of the white man and his advanced civilization.

Today in proportion to the increaser propensity of the colored people to go to the big centers of population in like manner has the venereal menace threatened his ranks. The well known song that the colored man chants, "He rambled, he rambled, he rambled till the butcher man cut him down" is pathetically true in more ways than one. The venereal butcher man lays him low by the tens of thousands annually. On the return of the prodigal son from his travels there is a noteworthy increase in the numbers of darkies applying to the apothecary for medicines purported to cure "stains," "running rage," etc., nor is this peculiar state of affairs limited to those of "dusky hue" for there are other prodigal sons of different color that are prolific sources of trouble. Probably every nation under the sun is infected with this particular breed. Heretofore society has had no way of knowing of the countless number of human derelicts strewn along the highway of licentiousness. The public should know of the thousands of children in the world whose eyes have been forever curtained by the gonococcus and whose minds have been clouded by the treponema palida. Dwarfed and deformed bodies harboring minds of imbeciles are encountered every day in every part of the world resulting no doubt more often than is suspected to this course of the human race.

The public should know of the thousands of unsexed and sterile women made so in toll to the inexorable depredations of the gonococcus, and it should be told that the larger per cent of major gynecology is due to the ravages of this same organism.

One of the saddest pictures that the doctor has ever known is that of the ignorant and trusting bride who marries what she thinks to be her ideal, a man's man, and a ladies' man, one who prides himself on being a regular fellow, and looks forward to a happy married life and with what is her heritage-children; all to soon comes the discharge that knowingly or unknowingly the family physician assures her is a result of marital relations and will soon adjust itself without treatment. Then follows the slight pain in the pelvic region accompanied by a noticeable tenderness. At first it seems that there is little reason for apprehension, so uncomplainingly she travels her road pain, not knowing the cause of her suffering, believing it to be a woman's portion. In the meantime, the errant husband, light-hearted libertine that he is, goes on his way like the proverbial lion, seeking whom he may distroy. Finally there comes a day when the wife finds herself a bed-ridden invalid and it dawns on her that she is seriously ill. Next comes the trip to the hospital with its attendant dangers and mutilation for something that she is both ignorant of and innocent of. In due time she leaves the hospital, if indeed this is to be her good fortune, unsexed and with her most cherished hopethat of motherhood-gone forever. Surely something should be done to avert this appalling misfortune that is befalling so many of our women day after day. Sympathy on the part of the guilty party will never bring relief or satisfy the demands of justice. The guilty must pay somewhere, sometime. To attempt to give even approximate statistics on the prevalence of gonorrhea and spyhilis is manifestly impossible for thousands of these patients never go to physicians and a knowledge of their presence never reaches the collector of statistics. The very nature

of these diseases insure their existence being scrupulously safeguarded. Many of the sufferers never confide their secret to anyone, simply buying patent medicines said to cure such disease as they think they have. is safe to say that not less than 60 per cent of males at one time or another have had gonorrhea or syphilis, or perhaps both simultaneously. As to their prevalence among females it is far more difficult to arrive at conclusion. Some fifteen years ago, Dr. Keyes, the urologist, thought that there were perhaps sixteen cases among males to each found the opposite sex. Were he living today no doubt he would revise figures. Owing to inborn modesty the female is slow to consult a physician, and when she does he is often left in doubt as to the present or absence of the gonococcus. Numerous mistakes in diagnosis are made in this realm of medical science. Fortunately nature unaided often brings these cases to a safe conclusion .It is a curious fact states Dr. Keyes that gonorrhea is either much more mild or much more severe in the female than the male. Many females are unaware that anything is wrong while other are quickly overwhelmed by salpingitis, pelvic abscess, and at complicating peritonitis. the male one encounters an inflammatory condition of the prostate gland in practically all cases where posturethea has been invaded. Here it is frequently most intractable and is a source of many grave lesions within the gland itself, and here too we find the port of entry of systemic gonorrhea. When there is a cessation of discharge from the external meatus the patient experiences a feeling of false security not being conscious of the fact that the deep urethra in very many instances is still an excreting surface that is unloading pus well laden with the infectious organisms. This very condition constitutes

the greatest menace on the part of the male. He ignorantly in cases transmits the infection to the wife or prostitute. He is misled through the circumstance of the pus being prevented from appearing at the external meatus by the action of the compressor urethra or "cut off" The last count in the indictmuscle. ment against gonorrhea is systemic gonorrhea or gonorrhea rheumatism. A condition comparatively rare and fairly controllable. This condition is rather grave in that at times it is responsible for iritis and endocarditis. About one-half of one per cent of gonorrheal cases are supposed to have systemic gonorrhea. Its course is one of slow progress to a cure that is usually permanent. As to a man or woman being permanently hopelessly disabled by the social diseases, authorities differ There are some of large experiences who believe or at least profess to believe that no one is ever thoroughly cured of gonorrhea. Any statistics at all and in any sphere of human endeavor where the collector of same is both judge and jury should be carefully considered before ance. No man's opinion is infallible and on one has a monopoly on wisdom. Certainly there is a reasonable expectation of cure in 75 per cent of all cases that take a thorough course of retinal treatment.

We vainly search for a remedy for the present deplorable status of the social disease menace. We ask ourselves the question whether or not legal measures will be effacacious. This is extremely doubtful. A standardized examination of the applicant for marriage made in a correct and impartial manner by a board appointed by the state medical authorities would be a step in advance of the present slip shod method where the family physician is the arbiter as to eligibility for marriage. The question of marital unfaithfulness and



The young long leaf pine emerging from the infant stage resembles a candelabrum. It is an aristocrat of trees.

clandestine living is well night unsurmountable and is obviously beyond the pale of the law. Women must learn, if indeed they do not know, that man and woman hold entirely different positions as to infractions of moral law both as to physical consequences to themselves and of public opinion. No such appalling misfortune awaits the male who has contracted gonorrhea as that threatens the life and character of the female. The guilty man belongs to that class in the majority, but not so in woman's case. In the eyes of society man is hurt little while under the same count the woman is rated an outcast, and often has to suffer in addition to social ostracism ravages of disease that are irreparable. Thus to some extent we see that the wages of sin are less inexorable in the case

of the male. This unfairness is apparent to all, yet it must be faced by society in general. Women are often innocently and accidentally infected by using unclean syringe nozzles, unclean linen, etc. All physicians now-a-days encounter valvitis young females due to criminal carelessness on the part of those responsible for their care. It is highly probable that the number of venereal cases is on the increase and that the social diseases are penetrating strata of society hitherto immune. It is becoming noticeable that colored people are no longer prolific. The majority of unions being productive of no increase in population. The gynecologist knows better than anyone else of the enormous number of cases of uterine adnexa removed from the women of both races on account of the inroads of venereal disease. Females generally and not a few males know practically nothing of the nature of syphilis and gonorrhea.

In the case of the young female many times when the moral issue involved is not sufficient to restrain her from a plunge into the realm of venery the fear of physical suffering will disuade her. Every growing girl and young woman should be informed in some way as to the prevalence and the nature of gonorrheal and syphilitic infection. The young male is better informed on such matters than is the female.

Every living thing seeks to evade anything that will entail bodily suffering. If the public could follow the doctor through the wards of suffering ever present in all hospitals, and after a manner this is possible through the press, and there see the countless victims doomed to the operating table through the agency of venereal disease, it would take this problem of the social disease far more seriously than it does under present conditions. Society in general would consider well before taking any step

that would lead into this road at the end of which is only broken bodies, heartaches and blighted lives. Numerous indeed are the sacrifices made each year at the shrine of Venus through ignorance as well as through wilful waywardness. An improvement in the moral tone of society offers the best solution of the venereal problem. Our ministers and welfare workers might be more effective if they spoke more plainly, using terms that could not be misunderstood. The proper dissemination of literature bearing on this subject would undoubtedly have a far reaching effect. Punishment for the guilty parties would be effacacious could they always be apprehended. Small cash fines and suspended sentences do little good towards restraining the hygienic law breaker as will those who break other laws. Punishment regardless of the offense aimed at are practically worthless unless they hurt. The prospect of real punishment would make the infectious libertine consider well his step before advancing further along his road of conquest. Our present laws regarding venereal disease are broken with the same impunity and abandon that traffic laws are broken.

As to individual prevention there is no infallible method. A better method of dealing with prostitutes would be a big advance. Putting them to some kind of hard work and seeing that they did it would help some. The idea of work is odious to this class of our population and only an iron hand can ever make them do it.

Bringing venereal disease and sexual matters into the light of day and into public understanding seems plausible. The prostitute like the poor we have with us always still it is to be hoped that in the future it will be in ever decreasing rather than increasing numbers. Whether or not the social diseases are undermining the physical and moral standing of this nation is a question worth deliberating.

Will Uncle Sam, today the mighty of earth, fall as did Sampson of old, to the lusts of the flesh? The question is a reasonable one.

IMMUNIZATION

By

DON M. GRISWOLD, M. D.

Immunization is one of the more recent methods to be used to prevent the spread of communicable diseases. Not only is it one of the newest methods, but it is by far the most effective of all the measures employed in the control of preventable diseases.

Reporting of communicable diseases has been in use throughout the centuries. The first step necessary in the control of any communicable disease is to know where, when, and under what circumstances cases are occurring.

Placarding of individuals or the dwelling places of individuals having a communicable disease was begun in early Egyptian history. Its purpose was to announce the location of a source of danger to health.

Quarantining was first used by the venetians who noticed that after the visit of ships from certain ports, sickness developed among the citizens. It was found that if the ships were detained in the harbor for forty days before the men or goods were allowed to come ashore, the cases all occurred on the boat and none of them among the inhabitants of the city. It was from "quaranta," the forty day delay, that the name quarantine was derived.

Isolation came into practice when it was realized that there was a group of diseases, such as measles, whooping-cough, mumps, chickenpox, and German measles that did not warrant the stringency of quarantine.

Immunization is the last of the protective measures to come into use. The era of immunization can be said to have been ushered in by the announcement of Jenner that persons who had had cowpox would not contract smallpox. This observation was made in 1796. Surely the mind of man works slowly, when 130 years later we still find unvaccinated people.

Ample proof of Jenner's assertion was soon supplied by epidemiological study of the history of cases of smallpox. This brought about the practice of artificially inoculating with cowpox virus in order to produce this rather harmless diseases for the benefit of the resulting immunity against smallpox. Modern laboratory procedures have so purified and standardized the cowpox virus that the product of the biological laboratories is now just sufficient to cause one small lesion at the site of inoculation. Even with this small lesion the resulting immunity is complete for a period of seven years. Many people, especially babies and preschool children, carry this immunity for their whole life.

Typhoid fever was the next great scourge to have its terrors removed by immunization. The work of Dr. Almroth Wright who made the first vaccine has undoubtedly saved thousands of lives. During the Spanish-American War, 22,000 American soldiers contracted this one disease, a larger number than ever fired musket at the enemy. As a result of this great sacrifice of human life. studies were made that have brought this disease under control in all well sanitated communities. The studies of Vaughn, Shakespear and Reed begun in 1898 have borne fruit and have saved more lives than were lost during the entire Spanish-American War.

Typhoid vaccine has been used under the conditions of military and civil life for thirty years and has proved eminently satisfactory.

Diphtheria prevention by immunization with antitoxin was begun soon after announcement of the antitoxin by Roux and Von Behring in 1894. This immunization is complete, but is of short duration, seldom lasting



This is a grove of North Carolina young long leaf pines. The earlier years of this writer were spent amid a virgin forest of full grown long leaf pines. He has no fonder memories of childhood than the many happy days among those wonderful pines. The individual who has never silently and reverently listened to the soughing music of the wind passing through the green pine bows in winter, has missed something no radio voice can supply. Let us all hope that through proper conservation the people of this State 50 to 100 years hence may again have such privileges as fell to the poorest of us a half century ago.

longer than from three to six weeks. The need of a more permanent lasting immunizing agent led many American scientists to research this field. Theobold Smith, Houghton, and many other biological laboratory workers noted that when the animals used in experiments were given an overdose of diphtheria toxin and were saved by the subsequent administration of diphtheria antitoxin, these animals invariably developed a higher degree of immunity and it lasted for a longer time than otherwise. This research led to discovery of a mixture of toxin and antitoxin that would bring about a lasting immunity in a large number of persons to whom three inoculation were administered. This immunity develops in from six to twelve weeks and remains for at least seven years, and some people retain it for their entire life time.

In general, the younger the person receiving the treatments, the higher the degree of immunity and the more lasting its quality. Babies under six months of age are naturally immune. Children from six months to six years of age are highly susceptible. All children should be immunized against diphtheria. This method has been used since 1815 and millions of people have been protected by it.

Scarlet fever is the latest one of

the acute communicable diseases to be met with an adequate method of prevention by immunization. The researches of the Doctors Dick gave us a much needed protection against this disease. Since 1920 many thousand doses of scarlet fever streptococcus toxin have been administered, and immunization by this method is now an accomplished fact.

are deciding that Many parents they have not fulfilled their entire responsibility to their children until they have given them the benefits of these immunizing procedures. This is the personal responsibility of the parent. Health officials as well as other public authorities are becoming more convinced as experience in the use of procedures increases, immunizing that more disease can be prevented by immunization than by all other means combined. It is much cheaper money, not to mention the sickness and suffering, to immunize and prevent acute communicable diseases than to allow them to take their toll and try to clear up the wreckage.

To be of its greatest usefulness, immunization against any disease should be carried out between epidemics when there are no cases in the community. This requires an understanding of the facts that fortunately is becoming increasingly common among modern parents.—

Michigan Public Health Bulletin.

A NEW BOOK ABOUT MILK

Doctor Samuel J. Crumbine, general executive of the American Child Health Association, and Dr. James A. Tobey, of New York City, have written a new book about milk. The title of the book is, "The Most Nearly Perfect Food; The Story of Milk." It is published by the Williams and Wilkins Company, Baltimore, and sells for \$2.50. Dr. Charles Bolduan, director of Health Education of the New York City Department of Health

in a review of this book, has the following to say:

"This is one of the best presentations of the interesting phases of what is probably the most important single food of man. Excellently planned and well told, the material holds the reader's attention throughout. Scientifically accurate, the text can be relied upon by teachers and students of home economics, dietetics, agriculture and dairy science, medicin, public health and particularly child hygiene and school hygiene."

We would like to add that this book would make a very convenient reference for health officers. It is conservative, and does not pretend to say that milk is a perfect food, and therefore what they do have to say about the value of milk is much more dependable than it would otherwise be. The book would make a splendid reference reading for high schools and colleges when studying about milk.

THE COST OF SICKNESS

There is not an adult responsible human being livin gbut what is concerned either directly or indirectly about the question of "What it costs to be sick." Up to this time there has not ben available any exact data setting forth all the facts of the very much involved question of the cost of sickness. Realizing things the American Medical Association acting with several foundations has created a committee for the purpose of making an extensive study of all phases of the subject. This group of people composing the committee, and known as "The Committee On the Cost Medical Care," represent the public,

the medical profession, public health, institutions, and many other special interests. They are working on a five years program of exhaustive study. Dr. Ray Lyman Wilbur is the chairman, and Dr. Harry H. Moore is director of esearch study. Dr. W. S. Rankin of the Duke Foundation is a member of the committee, representing "Institutions and Special Interests."

The editor of the Health Bulletin is pleased to say that judging from some of the preliminary reports received from Dr. Moore that he believes the study will be of great value to the doctors, hospitals, the sick and to the general public.

HOW'S THIS FOR MILK DRINKING

A local paragraph in the Dayton, Ohio, Health Bulletin describes the habits of a native daughter of Dayton who is married and living in Seattle, Washington. The former Daytonian and her husband have nine children, composing a family of eleven persons. They are all milk drinkers, and the milk man leaves seventeen quarts of milk at the house each morning. This quantity of milk is somewhat in excess of the recognized normal requirements of the average person, but it is a habit that is much better to carry to excess than to fail to come up to the required standards.

This Seattle family ought to be a healthy family. Just imagine for a moment that the per capita consumption of milk in the State of North

Carolina was placed on such a basis for one year. It requires little effort to imagine what a transformation such a habit would mean to the health and prosperity of all the people in the State. In the first place, think of the hundreds and even thousands of children who are getting an insufficient quantity of milk at present, who would be so greatly benefitted, and whose health would so greatly improve following such a diet. Then imagine, if you will, what the effect would be on the dairymen and local producers of milk throughout the whole State. It would literally transform eastern North from a tobacco raising, cotton growing tenant ridden section, to a land of stock raising, home owning, healthy, satisfied population.

PROPERTY AGAINST HUMAN LIFE

By

REV. STANLEY C. HARRELL

The news of the day carries an announcement that China is rushing 100,000 troops to the border to resist advances of the Russians, and that daily conflicts are taking plase. The controversy between the two powers has risen over the possession and control of a railway system. The nations of the world have been engaged in a serious attempt to outlaw war. Every effort in that direction is to be most highly commended, but there is question as to whether the abolition of war can ever be accomplished until more has been done than the mere outlawing of armed conflicts.

What the world most urgently needs is a complete revision of its standards of values. It has long been the custom to place a higher value upon property than upon human life. Especially have nations been guilty of this atrocity of judgment. There was a time when an effort was made to cover up the effort to secure national possessions by the term "national honor." But in recent years even that has been abandoned, and national officials talk openly of protecting material possessions and securing economic advantages. And always there is back of this talk the idea of using armies to protect property and to secure trade advantages. This is not to question the right of nations to protect their possessions; but we raise the question as to whether or not there should be at least some consideration of the lives of the men who are to be called upon to defend national possessions by the offering up of their lives. It should not be forgotten that nations which did not hesitate to engage in a war which involved almost the entire world, did not hesitate to talk of human beings as cannon fodder. Somehow, the two ideas of waging war and the wanton destruction of human life have always gone hand in hand. Many of the world's most successful generals have spilled blood as if it were no more than water. The fact that they did not hesitate to sacrifice the lives of thousands their men was the very factor that made them successful.

The oustanding teaching of the Christ is the supreme value which is placed upon human life. But today human life is about the cheapest commodity which the world knows. There is not a single social problem of the day that would be very difficult to solve if we had the Master's conception of the infinite worth of human life. What agency or institution is so well qualified to proclaim this message as the Church, which calls her Head the Lord of Life.—The Christian Sun

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ST. AGNES HOSPITAL FOR NEGROES, RALEIGH



Here is a photograph of St. Agnes Hospital for Negroes at Raleigh. It is a modern hospital with a capacity of 100 beds. It is a first class institution in every particular. It was founded in 1896, and so has a third of a century of humanitarian service to its credit. Its graduate nurses have carried comfort to the s⁻ k throughout middle and eastern North Carolina and the physicians on its staff have saved many lives.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Care of the Baby Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies German Measles
Hookworm Disease
Infantile Paralysis
Influenza
Malaria
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Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Veneral Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine
monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who
Want Better Babies
Table of Heights and Welghts

The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age)

pampinet for enjoyen from 2 to years of age)
Baby's daily Time Cards: Under months; 5 to 6 months; 7, 8, and 9 months. 10, 11, and 12 months; year to 19 months; 19 months to years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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ONE FIRST IN WHICH WE MAY TAKE JUSTIFIABLE PRIDE

At the present time the subject of medical care and the provision of hospital facilities for the people of all classes everywhere is receiving more attention in the press of the country than any other subject. The weekly papers, the secular press, the magazines having national circulation, as well as the medical journals of the country, are printing every week, and every day in the daily papers, material on this subject.

It is well known that the State of North Carolina has been doing with a minimum bed capacity for hospital treatment for both white and colored people for a long time. With the aid of the funds provided by the late J. B. Duke, a great impetus has been given to the building and equipment of modern hospitals in the State during the last two or three years. The aid given by the Duke Foundation is extended to both white and colored people.

The colored people in many of the cities and towns of North Carolina, as well as some of the country sections, have a death rate, especially among the infant population, sometimes approximating twice that of the white people in the same locality. An essayist at the meeting of the North Carolina State Medical Society in 1929, from Winston-Salem, stated that the death rate among colored infants one year old or younger was more than twice as high the previous year in that city as the death rate among the white infants. There are

other places in the State where the same story could be told. This handicap is undoubtedly being gradually removed. It will take a long time, because the standards of living and other economic influences must be taken into consideration.

Farther along in this article we want to discuss intimately, and with pride, the hospital facilities for Negroes in North Carolina, but before going into the discussion of that feature we want to say something about the National Negro Health Week movement.

The Surgeon General of the United States Public Health Service, at the request of Dr. R. R. Moton, president of the Tuskegee Institute, the great Southern institution for Negroes, founded by Booker Washington, convened a conference in Washington last October to consider ways and means for the sixteenth annual observance of National Negro Health Week. It was decided to designate the week beginning March 30 and ending April 6, 1930, as the week in which all the public health agencies of the United States will be asked to concentrate their interest in the health of the Negro race.

At the aforementioned conference some dozen or more great national agencies especially interested in the advancement of public health among the Negroes were represented. Some of the topics that will be intimately discussed this year have been summarized by the report from the Surgeon General's office and include such items as "Finding Ways and Means for Carrying on Health Education and Other Activities throughout the Entire Year." In this attempt the importance of keeping alive the local organizations fostering community health among the Negroes will be especially stressed, in order that it may function throughout the year.

The United States Public Health Service will issue, as it has in the past, a special health week bulletin and poster which will be available at a cost of between twelve and fifteen dollars per thousand to any organization especially desiring to cooperate in this work and to help the movement along. The North Carolina State Board of Health, as in the past, will supply literature on various subjects in limited quantity, suitable for year round study as well as emphasizing the problems during the special week of study.

This National Week is especially promoted by the Tuskegee Conference and the National Negro Business League. It is hoped that this year all of the larger towns and cities of North Carolina which have considerable colored population may plan their observance of this week at as early date as possible and utilize not only the printed material, radio when possible, but the pulpits, the schools, and every other agency in which people may be reached with the message on how to prevent communicable disease and improve the general health of the race.

NEGRO HOSPITALS IN NORTH CAROLINA

As we remarked in the beginning of this article, any discussion of public health and medical care is invariably tied up with hospitalization for all those who are in need of hospital care. Very little progress was achieved in the battle against tuberculosis until a specialty of hospitalization for all who needed it was promoted.

Consistent efforts were started along this line about twenty-five years ago. It is therefore more than significant that in 1928 the general death rate of nearly every state in the Union increased over the preceding year, but the death rate from tuberculosis declined to the lowest point in the history of reporting in the United States. Any one who can read ought to be able to understand why such is the case.

In the conduct of hospitals for both white people and colored people many difficult technical questions have to be dealt with, for example, as to whether a hospital shall have a closed or open staff, and so on. In the provision for hospitalization for Negroes such difficulties have been enhanced by such questions as to whether or not the staff shall be composed of white physicians or colored physicians or a mixture of both.

Sometime ago we received a report written by Dr. H. M. Green, president of the National Hospital Association, which is composed of the Negro hospitals of the country. This association is an associate member of the American Hospital Association, and it is devoted to the program of improving the hospital situation among Negroes. The subject of the pamphlet written by Dr. Green is, "A More or less Critical Review of the Hospital Situation Among Negroes in the United States."

Doctor Green's report is a dispassionate, conservative statement of the situation which should receive, and we have no doubt will, the respect it is due in all medical circles in this country. In a description of the very few hospitals run exclusively for the Negro race Dr. Green in his report has the following to say which is of much interest to our people: "The Duke interest and the Richardson family have aided the Negroes of North Carolina to erect two splendid hospitals which give the Negroes of that State

added reason to be proud of their State."

Doctor Green had just mentioned the fact that there are only five school hospitals in the South exclusively for colored people, which include the splendid Saint Agnes Hospital in Raleigh. Dr. Green points out that "the Negro race is and must continue for a long time a poor race, working for small wages with little opportunity for investment or for advancement in the economic scale, therefore, must remain for a time a race of common laborers. They cannot hope to build or maintain large and well equipped hospitals, and unless some way is found to help them they may continue to suffer from discrimination."

In the foregoing paragraph Dr. Green is discussing the difficulty of treating colored people and white people in the same hospital, and one of the discriminations he mentions is that in a hospital, especially in the South, conducted for white and colored patients under the same roof the staff is always composed of white physicians. He very reasonably agrees that in most instances this is necessary.

Now for the justification of the title to this article. The Negroes of North Carolina today have available three of the most modern and well equipped hospitals specifically for Negroes, situated in towns of one hundred thousand people or under, existing anywhere in the country for any race. These three hospitals are Saint Agnes in Raleigh, the Lincoln in Durham, and the Richardson Memorial in Greensboro.

SAINT AGNES HOSPITAL, RALEIGH

Saint Agnes Hospital in Raleigh was founded in 1926 by Mrs. Sarah B. Hunter, wife of the then president of the Saint Augustine School. It is therefore known today as a "School Hospital." In the beginning

there were twelve beds for women and children. The first class of nurses, which numbered two, was graduated in 1898. The present building was erected in 1906 and comprised a bed capacity of seventy-five. Through an addition to this building in 1924 the number of beds in this hospital was increased to one hundred. They have at present five graduate nurses on staff and thirty-two pupil nurses in training. It may be said, without fear of contradiction from any quarter, that the nurses who have been graduated from this hospital during the last thirty years have done as much to ameliorate suffering among the Negro race as any other agency in the State. This hospital has the approval of the American Medical Association for intern training. It is fully accredited by the American College of Surgeons meeting minimum requirements, and has been placed in Class A by the North Carolina Board of Nurse Examiners. The Duke Endowment and the Julius Rosenwald Fund have recently assisted this hospital. This hospital has a medical staff composed of both white and colored physicians and surgeons who practice their profession in Raleigh.

LINCOLN HOSPITAL, DURHAM

This splendid new hospital has a capacity of one hundred and eight beds. The history of the origin and development of this hospital is one of the most interesting connected with the whole subject. The Editor of the Bulletin wrote to Dr. C. H. Shepard, medical superintendent of the Lincoln Hospital, requesting some information about the development of that institution. Dr. Shepard replied in a letter so interesting and so packed with information that we take pleasure in publishing it in full. His description follows:

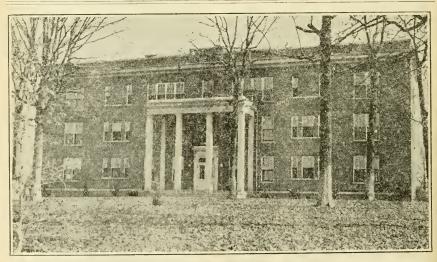
"Lincoln Hospital was organized in 1901 and opened in the same year. The hospital at that time was a frame structure of a thirty-nine bed capacity. It is a general hospital seeking to meet the needs of the colored people of Durham and vicinity.

"The first Lincoln Hospital was given to the colored people of Durham by Messrs. Washington Duke, J. B. Duke, B. N. Duke and B. L. Duke, as an appreciation for the loyalty of the old Negroes to the white people of this vicinity during the War Between the States, and for their part in the industrial development of the City of Durham. It is interesting to recall that for sometime Mr. Washington Duke had it in his mind to erect to them a monument on the campus of Trinity College, now Duke University, and made public statement of same. Dr. A. M. Moore, the first colored physician to practice in Durham, and John Merrick, a recognized friend of the Dukes, asked that they build a hospital instead of erecting a monument. The wisdom of their solicitation was so obvious as to meet with the instant approval of the Messrs. Duke, and the first Lincoln Hospital was erected on the corner of Proctor Street and Cozart Avenue. The entire cost of the first plant was \$8,551.00.

"The present hospital was erected in 1924 under an amended charter of 1923. The Dukes gave \$75,000.00 to the erection of the new building, while \$25,000.00 was given jointly by the County and City, \$25,000.00 by he white and \$25,000.00 by the colored people of Durham.

"The Board of Trustees is bi-racial and consists of the following: S. L. Warren, M. D., President of the Board, W. G. Pearson, Vice-President of the Board, W. C. Strudwick, M. D., Secretary, J. M. Avery, Treasurer, W. F. Carr, H. L. Carver, Clyde Donnell, M. D., R. L. Flowers, J. L. Pearson, M. E. Newsome, Foy Roberson, M. D., T. C. Graham, C. C. Spaulding, J. E. Shepard, C. H. Shepard, M. D. The superintendent of the hospital is C. H. Shepard, M. D.

"Lincoln Hospital is controlled by a



THE LINCOLN HOSPITAL FOR NEGROES AT DURHAM

The above is a picture of the quarter million dollar hospital for colored people at Durham, which has a history of twenty-nine years service to its credit. Please read Dr. Shepard's letter in this issue about the history of the Lincoln Hospital.

Board of Trustees, elected every two years by sources hereafter to be named. It is wisely provided in the charter that in the event the authorized sources of election fail to function. then the Board automatically becomes self-perpetuating. The sources election are as follows: The Duke Family or their representatives (2); Aldermen of the City of Durham (1); Academy of Medicine (white) Commissioners of the County of Durham (1); Academy of Medicine (colored) 3; North Carolina Mutual Insurance Co. (2); Royal Knights of King David (2); Colored Ministerial Association (1); North Carolina College for Negroes (1); Principals of the City Colored Schools (1).

"The value of building, plant and equipment is \$234,851.11. There is a total of 108 beds divided as follows: Six private room beds, ten semi-private room beds, seventy-nine ward beds, nine bassinets three baby cribs and one bed, Superintendent of Nurses.

"The Nurses' Training School was established in 1902 and has been in operation ever since. It has a grade "A" classification. The hospital also is recognized as a class "A" institution by the American College of Physicians and has at the present five registered nurses, three interns, thirty-five student nurses, one orderly, two janitors, fireman and three cooks. The requirement for entrance to the School of Nursing is a high school diploma and three years are required for graduation. There is a Nurses' Home, the gift of Mr. B. N. Duke, which cost \$25,000, containing class room and Dietetic Department.

"During 1929 our new X-ray machine was installed at a cost of \$6,000.00. During the same year there were fifty-three physicians treating patients in the hospital."

L. RICHARDSON MEMORIAL HOSPITAL, GREENSBORO

The Richardson Memorial Hospital of Greensboro, North Carolina, opened its doors on the 18th of May, 1927. We find the following interesting history reported in their hospital bulletin, kindly sent to the writer by the medical superintendent.

In January, 1923, some colored citizens of Greensboro, realizing the great need for a hospital for colored people in that city, met together and organized the Greensboro Negro Hospital Association. Out of this organization grew the active plans for the hospital. The family of the late L. Richardson of Greensboro were induced to become interested and they contributed fifty thousand dollars to help in the erection of the hospital. Mrs. Emanuel Sternberger contributed ten thousand for the equipment of an operating room and an X-ray department. The institution was named the L. Richardson Memorial Hospital in honor of the late L. Richardson "not only because the gift from this family was the largest, but because of his well known kindness and sacrifices for the poor unfortunate colored people in the city."

This hospital has a bed capacity of fifty-six with an addition of seven beds for infants. It has a splendid nurse training school, and a nurses building has been recently completed, providing rooms for thirty-two nurses. The Duke Foundation and the Rosenwald Fund assisted in the construction of the nurses home, and they also assist in the maintenance of the hospital. The hospital has a mixed staff of white and colored physicians who work in harmony.

This hospital is one of the most modern anywhere, and it has recently become affiliated with the Agricultural and Technical College for Negroes, the great State institution for Negroes which is located at Greensboro. The A. and T. College

has been recognized by the American Medical Association as one of the twenty-five Negro colleges in the more than one hundred Negro colleges of America in which two years credit in pre-medical work is allowed. hospital has a corps of nineteen nurses in training as well as a staff of five registered nurses. It has been recognized by the American College of Surgeons and approved by the American Medical Association. It is accorded an "A" grade by the American College of Surgeons, one of the few Negro hospitals in America to be so recognized. Dr. S. P. Sebastian, the medical superintendent, has been a practicing physician in Greensboro since 1912 and has devoted his life to the task of getting a hospital for colored people built in that city. The nurses training school has been fully recognized by the North Carolina Board of Nurse Examiners.

These three hospitals for Negroes, in three of the largest towns in North Carolina, emphasize what is being done to promote the health of colored people in this State. It is interesting to record that plans are under way for the erection of several other large hospitals for Negroes in other sections of the State. These things, however, may be told in another story.

SOME OBSERVATIONS ABOUT PNEUMONIA

Pneumonia in all its varied forms still ranges very near the top of the list as the cause of death in the United States. In many great cities of the country it is either first or second as a cause of death every year.

There seems as yet to be no specific means of preventing pneumonia. Like so many other diseases, there is a great deal that no one understands concerning the distribution and occurrence of pneumonia. There are a few things that seem to be definitely settled. One is that pneumonia seldom occurs except as a sequence to some communicable disease, acute respiratory infection, or wounds in accidents of various kind. Another thing, as every physician practicing in rural districts knows, pneumonia frequently occurs in very virulent form, causing two or more deaths in the same family sometimes, among the farm population. This seems to indicate that people living close together in the cities may develop a kind of contact immunity which protects them often from the virulent attacks of pneumonia and which the farm family living in an isolated section, having little intimate contact with other people, do not seem to have.

Pneumonia organisms, that is the germs which cause acute outbreaks of pneumonia, are very common and may be found following a microscopical examination of the secretion in the mouths of many people, at frequent intervals, who seldom if ever develop an acute attack of pneumonia. This indicates that there is some agency acting in a way which lessens the immunity of individuals at certain times, which causes them to succumb to attacks of pneumonia.

Pneumonia most frequently follows attacks of a condition which highly technical people have designated as acute respiratory infection and such, and what the man in the street calls the common cold. If colds and other communicable disease, especially such diseases as measles and whooping cough in children, could be definitely prevented, it is easy to understand that the death rate from pneumonia could be greatly lowered.

We have recently seen in several state health publications, and in different technical journals, published reports giving the result of investigations made by two representatives of the Rockefeller Foundation in the state of Alabama. We are herewith quoting from one of these reports for the information of our readers. We quote without comment as follows:

"These men went to a sparsely settled community in Alabama and made observations on all the cases of pneumonia occurring in an area of approximately a thousand square miles, having a population of about 35,000.

"The disease has certain peculiarities in a warm climate and it was thought that a study of these might be of value in helping to formulate measures directed toward saving some of the 100,000 lives lost annually by the disease.

"This particular community was comparatively free from the common cold until directly following a week of cold weather beginning January 1. At this time the mean weekly temperature reached 24 degrees F. and a wide-spread epidemic of colds occurred. From these colds most of the cases of pneumonia developed within two or three weeks. It was established that following a period of cold weather, with attendant suffering and exposure, pneumonia became pre-

valent. The sequence was, first, cold weather, second, an epidemic of colds, third, pneumonia.

"In individual cases the acute colds developed into pneumonia often following exposure while riding several hours in a wind, or getting rainsoaked and thoroughly chilled when returning from school. Most of the cases occurred in children under 15 years of age and the relation of chilling to the development of a cold and then pneumonia was quite definite. There would have been fewer cases of pneumonia had these children with colds not been sent to school during the inclement weather, and of course exposure and chilling incident to the "cold snaps" on January 1 contributed to the acute upper respiratory infection which preceded the monia.

"The writers could not but be impressed with the conditions in this community as comparable with those of the pioneer days of our forefathers. A lack of frequent contact with each other produced a community of people with relatively low resistance to pneumonia of the form studied. Under crowded conditions of



Enjoying Raleigh's January sunshine on an economy screened sunporch (8x7 ft.) that cost but \$12.00 for materials plus "daddy's" labor.

city life there occurs a kind of community resistance to the same types of germs which in isolated areas caused serious illness. However, the same factors-namely, exposure and chilling-often are responsible for colds and pneumonia in a Northern climate, and these are due to organisms to which we have not become accustomed."

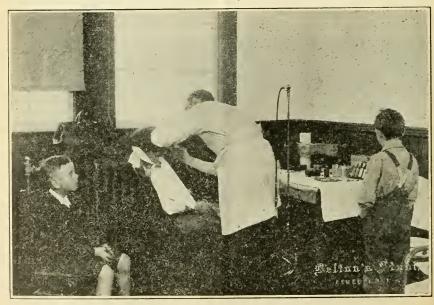
The suggestions which it is perhaps worth while for us to pass along in a discussion of pneumonia is to recommend that people suffering from respiratory infections, coughing, and sneezing, and so on, should avoid contact with their fellows. They should stay at home in bed during the acute stages of these conditions in order to protect other people. We would also like to urge upon people whose duties and pleasures take them frequently among other folks that they try to avoid crowding in stores, theaters, churches, and street cars, or in automobiles, especially where they might be thrown in direct contact with some individual who happens to be a carrier at that particular time. In conclusion, it is hardly necessary to say that close attention to personal hygiene would seem to help in warding off such diseases.

A HEALTH PROJECT OF LOCAL CONCERN

Under the above heading the Statesville Landmark recently published an excellent editorial discussing a proposed big drainage project of interest to the people of Statesville and a large part of Iredell County. The preliminary remarks of the editor, before entering into the discussion of the drainage project, are tary measures, anything tending to

so very much to the point, and so interesting, that we herewith quote that part of his editorial in the hope that it may be read by all the readers of the Health Bulletin to their profit.

"Good health is of first importance in the scheme of things. In any consideration of public betterment, sani-



State Board of Health School Dentist in action at Asheboro.

guard general health conditions, which means guarding the individual health, should have first place. These things are banal, so much so that it seems hardly necessary to mention them. But as a matter of fact the general public is so much inclined to be indifferent to this primary requisite of its welfare that very often nothing is done to remedy the most obvious need until conditions become so bad that it is a matter of survival. Meantime the health of many individuals has been wrecked, in some cases permanently; many lives have been lost and the economic damage far surpasses that suffered from fire and storm and flood which attract general attention and arouse the citizenry to prompt action for relief, We are curious that way, but notwithstanding some improvement under the urge of modern methods we are still very much indifferent. It is the heritage of the older day when sickness was accepted as a visitation of God. We now know better than to charge God with responsibility for results of our own negligence, the failure to do the things we can do for ourselves. But we are not yet living up to the information."

THE NURSES' PAGE

Time Now for the Examination of Children Who Expect to Ente: School This Fall

In the counties of North Carolina having whole time health departments their organization work is already well under way and their program formulated for the examination of small children of five and half years old, who are expected to enter school for the first time this fall. Last year this work was very successful in a number of counties in which the health officers cooperated with the parent-teacher organizations and in which the work was performed in a thorough-going manner during the months of April and May, and in some counties even earlier.

The parent-teacher organization, which by this time, is organized in every county of the State to a more or less extent, has carried out to increasing satisfaction for the past three or four years the policy of careful examination by competent physicians and dentists, of children who have been found to have handicaps, such as decayed teeth or other physical defects, which may be remedied during the spring and summer previous to entering school and at the beginning of the session in the autumn. The strong point in the parent-teach-

er organization is that they have carefully systematized the work, and certain members of the association, who represent the mothers of each grade, assume the responsibility for following up the examination in order to see that the children found needing treatment have such treatment available.

During 1929 the nurses of the State Board of Health assisted in the work carried on in thirty-five different counties. This work was done for the most part by nurses employed by the Bureau of Maternity and Infancy. The nurses in that bureau alone were instrumental in securing the examination of more than seven thousand of these small children. The director of the Bureau of Maternity and Infancy stated in his report to the American Child Health Association that this work was carried out to a great extent last year in connection with the celebration of May Day. He reports that in one county where the clinics were conducted on a countywide scale more than sixty per cent of the defects discovered had been corrected before the end of the summer. He stated further that in most of the counties where the bureau nurses assisted in the conduct of the clinics that they were assured that this work would be an annual occurrence and would be extended to include practically all the children in other regions of these counties which had not heretofore been reached.

Lack of space makes it impossible for us to go into detail in describing the classification of defects found in the more than seven thousand children whom the nurses of the Bureau of Maternity and Infancy were instrumental in having examined by physicians. It is to be hoped that this year the work will be extended to include every county in the State. The parent-teacher organization may rest assured that the physicians and dentists in the respective counties will be willing to assist them in any reasonable manner in carrying out this work for the benefit of the handicapped children.

The educational department still reports every year a large percentage of children who are grade repeaters. For the most part these children repeat the grades because of physical ailments, sickness resulting in loss of time, and many other causes which are often brought out and remedied when taken in time. Therefore conception of the pre-school roundup is a sensible idea. In the first place, it takes care of the children at an earlier age than would be the case if no efforts were made along this line until after the school session, even though the first session for these children was well under way. Another reason is that the children who can enter school in good shape physically will stand a much better chance of doing successful school work, making the average attendance, and in successfully passing the grade requirements for the first two three years.

The nurses from the State Board of Health are engaged in this work

at present and will lend all aid within their power to assist again this year in making the work successful. these lines are written, early in February, the work is well under way and most of the nurses whom it is possible to provide for this have programs already arranged and promises made to about the limit of their capacity for this year. This, however, need not deter the parentteacher organizations and the local health departments and the medical societies about over the State from carrying out the work to a successful conclusion in every county in North Carolina.

Doctor George Collins, Director of the Bureau of Maternity and Infancy of the State Board of Health, who is the official representative of



This little Fayetteville lady is the healthy young daughter of a trained nurse and she is named for one of the State Board of Health nurses. The report is that she has been "raised" to her present state of perfection by State Board of Health literature, with Frank Richardson's book as the consultant.

the Board cooperating with the State Department of Education and the Parent-Teacher Association, has issued recently the following letter to interested organizations:

"The State Congress of Parents and Teachers, State Board of Education and State Board of Health are again sponsoring and promoting cooperatively the organization and conduct of clinics for the physical examination and immunization against communicable diseases of the children to enter school next fall for the first time. The problem of reaching the child that is about ready to enter school for the first time is a difficult one and the observation of the methods used by others is of particular interest. The most effective of the methods that are being used is herewith briefly summarized.

"First, by arrangement with the board of education, superintendent of schools and principals, a registration of the children that are to enter school next fall for the first time is obtained, including the names and addresses of parents. This preschool registration can be very effectively secured through the children already in school. Of course, by such a meth-

od, not all of the preschool population is reached but a greater number is reached in this manner than by the usual methods of advertising.

"Second, the health department or county medical society undertakes in any manner that it sees fit, the physical examinations and vaccinations.

"Third, the Parent-Teacher association makes a definite contribution by way of advertising, supplying lay assistance in the conduct of clinics, (if the clinic method is elected for the examinations) and assisting in providing transportation for children of certain families that cannot provide transportation for themselves.

"The State Congress of Parents and Teachers has sponsored the Summer Round-Up of the Preschool Child for several summers and their cooperation with the State and County Boards of Health and State and County Boards of Education has proved an invaluable aid.

"To briefly summarize the problem—getting in touch with and securing examination of the preschool children has been most effectively approached by cooperative effort by the Health, Education and Parent-Teacher organizations."

BETTY BLACKIE

Betty Blackie is what is called a "piney woods rooter." She belongs to Gapway School. This is a two teacher school about twenty-six miles from the county seat. The day the school nurse was there to weigh and measure and examine the children the teacher told her all about Betty Blackie.

Bettie Blackie is being right now in Gapway School, what the teachers call a "project" and the children a "projec." She is kept in a large pen several hundred yards from the schoolhouse. The teacher said they bought her, when she was small, to fatten and sell to get money to take a trip to the county seat. She said

some of the children had never been there.

At the noon recess the nurse and the teachers went down to the pen to inspect Bettie Blackie and to take her picture. The pen is real large for such a small pig. The children had built a board fence around it with a gate that was put up like bars except the bars were fastened together. The ground all over the enclosure was so rough it looked as if it had been plowed. It had not though. It was where Bettie Blackie had rooted it.

The teacher said they first put her in a much smaller pen but she seemed to pine and sicken. She also almost rooted her way out under the fence. Then is when they decided to enlarge her rooting space. The teacher said she was hard to fatten as she took so much exercise rooting. Perhaps the children will get a good price for her as she is sure to make a good "streak-o-lean and streak-o-fat" breakfast bacon. Piney woods rooters do, so it

has been said, especially if they remember to feed her more every other day. Across the road from Betty Blackie's pen is a nice winter vegetable garden (date is Jan. 6th) of collards and turnips.

Let us hope the children will have a lovely trip to the county seat, thanks to Betty Blackie.

DEATH RATE FROM APPENDICITIS INCREASING

The keepers of vital statistics everywhere seem to agree that the death rate from appendicitis is increasing in every state in the Union. The most recent and acute increases seem to come from the Pacific coast. Dr. William Brady has commented recently on the observation of a medical writer from Oregon who had accounted for the enormous increase in that section as being in part due in delay caused by messing with the cults and quacks, who are thriving on the Pacific coast more than anywhere else in the country. Other states, however, are reporting considerable increases, the report from one big Eastern state recently indicating that there has been an increase of some eleven hundred deaths in that state for 1928 over any previous year.

There can be but one cause for this increase and that is the delay in consulting a competent physician who may make a diagnosis and have the patient on the operating table, in the hands of a competent surgeon, before rupture of the appendix and general abdominal complications have ensued. Many highly competent physicians and surgeons are firm in their opinion that the habit of prescribing large doses of castor oil, especially to children, upon the slightest complaint of pain in the abdominal region is responsible for a large per cent. of the increased mortality. Many physicians and surgeons also, are of the opinion that even the administration of soapsuds enema to a patient suffering

with abdominal pains which may be appendicitis is almost as disastrous to the patient as the administration of cathartics. These observations and signs are undoubtedly based on fact.

The safest advice that any doctor can give his patient over the telephone or on a bedside visit, as many of them daily practice, is to put any patient to bed in a recumbent position, without food or even water, upon the slightest complaint of abdominal pain, until a diagnosis eliminating appendicitis definitely can be made. In doing this many lives will undoubted y be saved which otherwise would be lost. In short, the good old safe practice of watchful waiting on the part of physician and patient and family should be restored to its former high place. In these days of increasing hospital facilities, when a competent surgeon is available within a few minutes reach of every individual in this State, if the proper care on the part of the patient, family, and physician is exercised, deaths from appendicitis should be decreasing instead of the reverse.

Some writer has recently expressed the view that there is no such thing as chronic appendicitis. This opinion is contrary, of course, to the majority of medical opinion, and we simply pass it along as a definite and worth while idea. It can do no harm, as ideas are one of the scarcest things in the world, scarcer than anything else except perhaps people who have courage enough to promulgate new

and advanced ideas in the face of current practice. This principle applies in medical circles stronger than perhaps anywhere else except among our legal brethren.

The physician who argues that there is no chronic appendicitis does so on the principle that there is no such a thing as a chronic toothache. Take the idea for what it is worth. The principle argument is that each attack of abdominal pain may be appendicitis, and every attack of appendicitis, even in the same individual, may have to be dealt with on an entirely different basis from every other such attack. The safest advice that we can give is for a patient who suspects the presence of appendicitis to trust fully to a competent physician and to lose no time in getting on an operating table when the evidence of appendicitis is established.

In concluding this sketch we cannot resist the temptation to quote a short poem written by Edgar A. Guest on the subject of castor oil. This is probably copyrighted, but we hope that Mr. Guest and his publishers will forgive us for this variation from legitimate publishing.

"I dont' mind lickins, now an' then, An' I can even stand it when My mother calls me in from play To run some errand right away. There's things 'bout bein' just a boy That ain't all happiness an' joy, But I suppose I've got to stand My share o' trouble in this land, An' I ain't kickin' much—but, say, The worst of parents is that they Don't realize just how they spoil A feller's life with castor oil.

"Of all the awful stuff, Gee Whiz! That is the very worst there is.

An' every time if I complain,
Or say I've got a little pain,

There's nothing else that they can think

'Cept castor oil for me to drink.

I notice, though when Pa is ill,
That he gets fixed up with a pill.
An' Pa don't handle Mother rough
An' make her swallow nasty stuff;
But when I've got a little ache,
It's castor oil I've got to take.

"I don't mind goin' up to bed
Afore I get the chapter read;
I don't mind bein' scolded, too,
For lots of things I didn't do;
But, Gee! I hate it when they say,
"Come! Swallow this—an' right
away"

Let poets sing about the joy
It is to be a little boy,
I'll tell the truth about my case;
The poets here can have my place,
An' I will take their life to toil,
If they will take my castor oil."



Raleigh baby 3 years old and never been sick.

RELATIONSHIP BETWEEN THE STATE BOARD OF HEALTH AND COUNTY HEALTH DEPARTMENTS

 $\mathbf{B}y$

CHARLES O'H. LAUGHINGHOUSE, State Health Officer (Address Health Officers' Conference, Raleigh, January 2, 1930)

In undertaking to discuss with you the relationship of the State Board of Health and the County Health Departments it is apparent in the very beginning that here are two agencies of distinct and separate units of government, interdependent and correlated, but nevertheless independent.

The powers and the duties of the State are constitutional; the powers and duties of the county are all other functions of government not delegated to the State. Just as an individual is averse to yielding supervision and direction to some other individual or social group, so counties yield to the State the power of supervision and direction over their local affairs with considerable reluctance. Moreover, let it be kept in mind that these larger supervisory powers of the State over the county are granted by persons elected by the individual counties, and not by persons elected by the State at large. The counties control the State and not the reverse; the county is the master and the State is the servant.

The larger and more important functions of the State may be expressed under two sub-divisions:

First, the State should deal with those problems of general interest which either in character or in cost of handling are such that the individual counties cannot undertake. Among such problems may be listed: (1) fixing and equalizing taxes; (2) operating the courts; (3) maintaining and supervising a system of common education; (4) protecting and developing the natural resources of the State, such as agriculture, forestry, water power, and manufacturing;

(5) building and maintaining a State system of highways; (6) caring for the defective and delinquent; and (7) preserving and promoting the public health.

Second, the State should discover. formulate, advocate and secure the adoption of standard methods of efficient administrative procedure. This purpose results from the opportunity which the central agency of government has, through its general point of view and through its extensive knowledge of various methods of procedure in operation in the different counties. to differentiate efficient from inefficient methods. In this way the State becomes a clearing house of information for the counties in improving their local administration. So it is that the State acquires a leadership which, properly developed, constitute one of its larger purposes.

The State has no powers those delegated to it by the counties through their representatives. counties have reserved for themselves the right of administering their internal affairs, among which may be enumerated: (1) establishing and maintaining county roads which not comprise a part of the system of State highways; (2) caring for the poor; (3) maintaining law and order through peace officers; (4) imposing and collecting all local and county taxes; (5) supervising the schools; (6) conducting elections; and improving local health conditions.

Of course there are many functions of government which are strictly State functions and others which are strictly county functions, and, in discussing the relation of State and

county, we may leave out of consideration those activities for which administrative responsibility is single and not dual. On the other hand it is obvious that the State and counties have many mutual interests and that there are numerous and closely related, overlapping responsibilities. In dealing with these matters of mutual interest it is important for the sake of harmony and efficiency that definitely understood and mutually satisfactory working relations be established. There are two main principles upon which such satisfactory relations may be developed.

The first principle is that of the segregation of responsibilities and activities, as for example: In the levying of taxes it is possible, and it is the practice in many States, to separate the sources of revenue from which the State is to derive funds from those sources of revenue from which the county is to derive its funds; in the building of roads it is possible and in many states a practice, for the State to build the highways that are more generally used, and for the county to build and maintain local roads.

The second principle for satisfactorily relating State and county activities consists in the establishment by the State of standard practices of administrative procedure, and the development of such standard practices by official machinery or personnel elected and controlled by the county and maintained jointly by local and State funds. Standards of work created by the State should, wherever possible, relate to definite objects to be obtained rather than to budgets to be expended, personnel to be employed, or methods of procedure to be followed. In short, standards should be directed to results; not methods.

With regard to public health work the State, that is, the federation of counties, is rightly held responsible for the condition of its death rate. In discharging this responsibility, two main avenues of service lie open:

First, the State should assume those public health activities that can be carried on, practically speaking, only on a State-wide scale and through State administrative machinery. Without entering into a discussion of the more important State-wide public health activities they may be classified and listed as follows:

A. Activities of common interest to all the counties and impracticable of county handling, such as:

- 1. State supervision over communicable diseases, for the reason that infection and contagion do not respect county boundaries;
- 2. Registration of births and deaths according to a standard system, for the reason that birth rates and death rates as between counties to have comparative value must be established by uniform practice; and
- 3. The protection of the purity of streams from which public water supplies are taken, for the reason that many streams flow through several counties before reaching the one or more whose citizens make use of such for domestic purposes.
- B. Activities which for economic reasons, for rendering unnecessary duplication and multiplication of officials, machinery, and equipment, belong properly to the State, such as:
- 1. The preparation and publication of educational bulletins, pamphlets and leaflets needed in public health administration, for the reason that the additional expense necessary for each county to prepare and publish such material would be alike unnecessary and extravagant; and
- 2. Maintenance of common laboratory facilities by the State for the same reason as that for maintaining central common equipment for the preparation of educational equipment.
- C. Activities concerned with disease factors of such exceptional importance that the State cannot neg-

lect them and at the same time carry the responsibility for a State-wide reduction in death rates, such as:

- 1. A State policy for dealing with tuberculosis.
- 2. A State policy for dealing with venereal diseases.
- 3. A State policy for dealing with the factors of infant mortality; and
- 4. A State policy dealing with the common physical defects of school children.

Second, the State in discharging its responsibility for the death rate should make use of its central position and its federated authority to tactfully, progressively, and persistently lead, not drive, the counties to a clearer recognition of their opportunities and responsibilities for local health conditions.

The individual county should be made to understand that, after State has gone its full length in dealing with public health conditions by general measures, the county may and can do much more in a local and more intense manner for the preservation and promotion of its own health conditions-just as the intelligent individual, after both State and county have done all in their power to protect his health, may still do much more for himself than both governments combined. The county should feel the same interest in its death rate and the same responsibility for maintaining a death rate that compares favorably with that of other counties that the State feels in maintaining a favorable comparative State rate.

A reduction in the death rate of a county is an object of mutual interest to both State and county governments. On the one hand, the greater the activities of the county in the reduction of its local death rate the more pronounced will be the reduction of the general death rate of the State; on the other hand, the more efficient the State-wide general meas-

ures for improving health conditions, the less the danger of diseases invading a particular county from other counties. It is clear, then, that a State reduction in death rates is achieved through a reduction of local county rates and a reduction by counties is reflected in a lower State rate. The interest of State and county in local health conditions is mutual.

Those who recognize local health work as a matter of mutual interest to both central and local governments will concede the right of the State to use every means to encourage county activity. They will go further. They will take the position that a matter of mutual interest should be developed, dealt with and financed if necessary by both agencies concerned. County health work, then, is a problem calling for the cooperative relation of State and county.

As pointed out in the general discussion of the relation of State and county, it is always best, where possible, for the fields of activity of two governments to be clearly fined. This means, when the nature of the work permits, a separation of activities. In local health work, however, the nature of the work is such as not to permit of the principle of separate or segregated duties, and, as likewise pointed out, in such cases it falls to the lot of the central government to develop standard plans and to assist and encourage, not direct, the local governments in their execution.

Upon these fundamental principles the State Board of Health has been developed over a period exceeding fifty yars. Through this system of formulating standard plans and assisting and encouraging their execution local county health units have been established and fostered till from Guilford County organized on June 1, 1911, the number has now reached forty-four, representing more than one-half the population and nearly

three-fourths the wealth of the State.

It is fitting, and necessary, that from time to time we stop and consider the basic principles upon which we are working. Such a review tends to clear away the cobwebs of misunderstanding, to steady feet that are tempted to stray from the charted course. Upon the principles which

we have been discussing, principles old and tried and true, but ever new, I pledge you the State Board of Health will continue to carry on. It asks your cooperation of mind and heart and soul that it may be of more and more service in your county to the end that North Carolinians shall have life and life more abundantly.

SCIENCE AND CULTISM

Now and then the medical profession is upbraided by the proponents of various notions in the field of health and science because it fails to give to their claims what they conceive to be adequate consideration. Again and again, the difficulies Galileo, Harvey, Jenner and Pasteur. when they attempted to convince the leaders of their times of the portance of their discoveries. cited as evidence that scientists are intolerant. Apparently cultists and others who have had but little experience in reasoning and logic, or with what is known as the scientific method, fail to take into account the fact that the world has moved since the time of the prophets, and that science has advanced more in the past fifty years than in the previous fifty centuries. James Harvey Robinson wrote an interesting essay on "The Importance of Being Historically Minded." With a proper perspective, one realizes that science is today in a position to demand evidence to an extent that might not have been warranted in a previous period when the whole world was dominated by magic and mysticism.

Recently, Mr. Chester Rowell, feature writer for the San Francisco Chronicle, discussed the appeal for tolerance made by faith-healing cults in the Los Angeles Times, following an expose by the editor of The Journal of some of the weird quackeries existing in Los Angeles. Mr. Rowell says:

"But the appeal for 'tolerance,' by

one 'school' of another, is an example of a common fallacy. There is 'tolerance' of astrology by astronomers. There is no 'tolerance' for fortune-telling by psychologists, nor of perpetual motion inventors by physicists, geologists do not locate oil or water by dowsing with a forked stick, nor 'tolerate' those who do. Entomologists do not 'tolerate' those who would exterminate insect pests by interfering with their spontaneous generation. Scentific agriculture does not 'tolerate' the theory that potatoes grow wrong unless planted in the dark of the moon. All these 'schools' exist, and they are all rejected outright as unscientific superstitions by every scientist in the world.

"On the other hand, good Catholics tolerate the Holy Rollers, and Buddhists tolerate the Mormons. Atheists tolerate the faith of Christians and Christians the unfaith of atheists. Protestants and Christian scientists tolerate each other's religion, each respecting the right of the other to seek God in his own way. But the law of the land did not tolerate polygamy, when the Mormons said it was religion, and the Regents of the University of California do not permit an anti-vaccinationist student to endanger the health of other students, even though he calls his objection religious.

"So in medicine. If it were a matter of faith, dogma or canons, one 'school' should 'tolerate' another. If it is a matter of science, then the only distinction is that of scientific and unscientific. And between science and non-science there is no equality of right, and no basis for tolerance. The fact that millions of devout people in India believe in casting their horoscopes by the stars does not erect them into a 'school' of astronomy, nor impose on astronomy any obligation 'regular' nor 'irregular' astronomers —they are not astronomers at Neither is any unscientific theory or practice of healing any part of the the science of medicine. There are only two sorts of medicine, scientific and unscientific. And of the unscientific 'schools,' science has only this to say-that they are unscientific.

"How, then, shall we distinguish which principles and practices healing are scientific, and which are not? The simplest test is that which we unhesitatingly apply in every other branch of knowledge. That is the judgment of scientists. If the scientists say that a certain thing is scientific, we accept it as such. If they all say it is unscientific, we say likewise, at least until it has succeeded in convincing them. Every scientific university in the world teaches astronomy, and not one teaches astrology. All of them teach chemistry and not one teaches alchemy. Every university in the world teaches scientific medicine, and not one of them-not a single one in the whole world teaches or recognizes any of the 'schools' or sects for which the Times

speaks. If the unanimous voice of science means anything, this is its verdict.

"The next test, and the decisive one, is that of method. Scientists may be mistaken, sometimes, in their results and conclusions. Sometimes a thing which seems true in the light of incomplete information becomes only partly true in the light of later discoveries. But science is not mistaken in its method. That method is systematic observation and experiment, and the submission of these observations and experiments to the scientists of the world, for them to repeat, to test and to scrutinize. Whatever pursues that method and is approved by that test is scientific-including, in medicine, light rays for tuberculosis, diet for many ailments and hydrotherapy for certain mental conditions. Whatever does not proceed by that method, or fails by that test, is unscientific-including all the cults, sects and schools which Dr. Fishbein rejects and the Times defends."

Mr. Rowell has placed his finger unerringly on the weaknesses of the cultists. His logic might well serve as a text in the schools, not only that it might aid the younger generation in learning the art of reasoning and judgment, but also that physicians might realize the basic folly of the strange schemes which are constantly being introduced to the public around them.—The A. M. A. Journal.

FARM RELIEF, BETTER FOOD, BETTER HEALTH

From the earliest written records made by man down to our own day there may be found proof that a large and influential portion, if not a majority, have held a fixed idea that our natural cravings were for things in their very nature hurtful to us. Doctors do not need a bill of particulars to call to mind a number of drugs, now known to be worthless, which were once held in high repute for no

other reason than because they were bitter or otherwise nasty; many can remember when orthodox treatment denied baths to fever patients and gave them water to drink only grudgingly and that tepid.

Right now the same line of reasoning (rather, unreasoning) causes our section to import white flour from which to make insipid bread, to the neglect of our own home grown corn and potatoes, which would meet our needs far more satisfactorily from the standpoints of both health and appetite.

The best of breakfast cakes is made of corn meal; but it is doubtful if corn cakes can be had in a half dozen restaurants in North Carolina tomorrow morning. Plenty will serve buckwheat cakes; and the buckwheat crop of the state is so small that few of its inhabitants would recognize buckwheat growing in the field. Thin. plain corn bread is preferred by the great majority of those who have had it plain, made up with milk or water and a little salt, unspoiled by powders, sugar or other fanciness, for eating with vegetables; and corn meal dumplings boiled in a pot of turnip greens with ham hock make a meal rarely to be equaled and never excelled.

Now about our potatoes. How many are there, do you think, who would choose cold sliced white bread "wasp-nest," as accurately defined by our epicurean friend, Mr. E. M. Bell) if offered hot potatoes roasted in their jackets? Until we lived some years outside the South, we wondered why people in other sections ate cold bread: living among them explained it; they don't eat it; they eat hot potatoes. But even there they order bread. We all have a hard time getting away from the idea that there must be "meat and bread" on the table. We are thus bound by tradition, much to our detriment.

In Eastern North Carolina, according to numerous newspaper accounts, more farmers are unable to pay their taxes than in any previous year in the history of the state. It is reliably reported that last year first grade potatoes, barreled by the roadside, were freely offered for the cost of the empty barrel.

In the name of common sense, selfhelp, good health and pleased appetities, why don't we eat our potatoes? Travelers in the poorest parts of Ireland, where the potato not only takes the place of bread, but for days at the time is the sole article of diet, find a vigorous, ruddy race. With the accessories which are to be had by even our poorest people, a diet satisfactory in every way is in easy reach.

The eastern counties of the Carolinas and Virginia grow sweet potatoes in quantities for the market. A paper in the past 10 days carried an account of the growing of 248 bushels on one acre in the Piedmont section. With care this vegetable can be cured so that it will make a welcome addition to every table several days in each week. It ought to be generally known, too, that, as to pumpkin pie, the more sweet potato and the less pumpkin, the better the pie.

Recent investigation has shown that the peach has dietary elements of the greatest value, and frequently we see in a diet list "orange juice or tomato juice;" why not recommend to our patients that they use tomato juice, and bear it in mind that our section grows many peaches and tomatoes and needs to have consumption increased, while there's not an orange or banana grove in our territory?

On a recent trip through Western Carolina it was noted that there appeared to be an unusually crop of apples, but the fruit small and knotty. Inquiry of the woman keeper of a drink stand elicited the explanation. There came a hail storm when the apples were The further information was vouchsafed, "Last year we had plenty of apples and they didn't bring but 20 cents a bushel; this year they offer a dollar, but we ain't got no apples." This mountain woman had studied economics only in the hard school of experience; but she had come to the heart of the farmer's troubles. Prices of farm products are always high when there are no products to sell. The winesaps and pippins of Virginia and the Carolinas are superior in every way (except in looks) to the much advertised apples of Washington and Oregon. We have just as handsome an apple as theirs, the "Ben Davis;" but, as might be expected, it isn't fit to eat.

In Southeastern North Carolina, centering about Chadbourn, Warsaw and a few other points, is one of the largest strawberry-growing areas in the world. Year after year a great part of the crop, and of the very best berries, goes to waste because after a few weeks of the season the price goes below the cost of picking and crates. Is there a person in the whole world who does not relish strawberry preserves? And where the perfect fruit goes to waste annually by the thousands of bushels, is there not a golden opportunity for salvage?

North Carolina's herring fisheries are among the greatest in the world, but entirely too much of the catch goes to making fertilizer. Ruegger's in Richmond, one of the most famous restaurants in the country, specializes in a breakfast of salt North Carolina roe herring and corn cakes; try to find that breakfast in Wilmington, Raleigh, Charlotte or Asheville!

The Health Committee of the Medical Society of the State of Wisconsin gives out a News Letter to the press of Wisconsin every week or two. This journal has been kindly placed on the mailing list, and it trusts that nothing said here will be taken amiss; rather that that state, and all others laboring under the major affliction of goitre will derive benefit. A recent news letter says:

"The lowly turnip and the onion were given a rank in the food diet high above the fancy cakes and salads by the Health Committee of the State Medical Society. Some old-fashioned vegetable dishes would become popular if the medical profession had its way.

'Don't despise the turnip and the onion when picking your food,' declares the statement in announcing a number of rules for healthful eating. Fearing that suggestion might not be sufficient the health committee added:

'Adopt a cosmopolitan menu—become acquainted with goulash, Irish stew, pig's knuckles and sauerkraut and a ragout with vegetables.'

The statement declares that many people eat continuously the same things with little variation, and point out that some of the symptoms of a lack of appetite come from a 'monotonous diet.' It declares that so far as health is concerned, 'the cheaper cuts of meat cooked with vegetables are better than a diet of steaks and chops.'

'One of the evils of the presentday eating is to depend too much on quick cooking,' continues the bulletin. 'Good health will not last with one minute meals'.''

The State of South Carolina has shown that her vegetables have an unusually high iodine content, has made out a good case for the contention that this is the explanation of the astonishingly small number of cases of goiter among her population. This journal has applauded, and applauds again, the fine endeaver, headed by Dr. Wm. Weston, of Columbia, which first formulated the concept, then established the fact, then instituted measures to turn the information to good account in the interest of the health of the country and of the agricultural industry of South Carolina. It is said that milk produced by cows that eat the grass and other vegetation produced in this favored state contains much more iodine and iron than that produced by cows in the areas famed for dairy products.

There is every reason to believe that investigations in North Carolina will disclose substantially the same conditions; and, if so, there will soon ensue a demand for more products than both states can supply.

The farmer has been the football of politics longer than any of us can remember. During campaigning he is always promised everything; once election results are announced he is given nothing except a lot of silly advice about "diversification," to the general effect that the cotton farmer should plant tobacco, the tobacco farmer cotton, the wheat farmer corn, the corn farmer wheat, and so on. And on every possible occasion the money he has paid into the treasury is voted to irrigate or drain and bring land now idle under cultivation to further glut the market with farm products.

We here reveal means by which our own farmers can be helped; and by no exercise of altruism, for we will be helping ourselves.

By eating potatoes and corn bread, not along with, but instead of, wheaten bread; by eating our own fruits, vegetables and dairy products; and by letting outlanders know of the superiority of our products, we can live on more appetizing food, produce a hardier, healthier citizenry, and go far toward assuring the farming and dairying industries of our section returns commensurate with their investments in labor and money.—Editorial in Southern Medicine and Surgery.

INTERESTING LETTER FROM DOCTOR WASHBURN NOW IN EUROPE

Doctor B. E. Washburn, formerly a member of the staff of the State Board of Health and a native of Rutherford County, is spending a year in Europe for special study. After leaving Raleigh about ten years ago Dr. Washburn was sent to Jamaica by the International Health Board, where he has made a fine record.

His letter is so interesting that we are sure his many friends in North Carolina will enjoy the extracts which we are here quoting.

Doctor Washburn's wife and daughter are with him, the latter studying drawing at the Royal Drawing Society of London.

"Dear Doctor Cooper:

"You will see by the above address that my year of study leave has at last materialized. We came here in September and I am taking the course at the London School of Tropical Medicine. It is very interesting but also very hard; in fact, I don't believe I have ever had to work so hard. We are kept busy from 9 to 5 every day except Saturday and I have to put in

most of the nights in order to keep up. It may be that I am slow with the work as this is my first attendance at school in about twenty years. We have completed the work in malaria and protozoology under Thomson and on last Friday had the exam. on helminthology, the course given by Professor Peiper. The intensive course ends early in March and, during the six or seven weeks of vacation, we plan to go to Italy where I want to study the malaria work being conducted there. When we return in time for the public health course at the London School on April 28, I will be in England until July. That month will be spent in Scotland, with Aberdeen as headquarters. At the completion of the year of study I plan to spend my four months of vacation in the States and we should reach Raleigh sometime during September of next year.

"Living in London is quite an interesting experience. There is no end of interesting places to visit—museums, galleries, exhibitions, etc. You never get to the end of the list; and, this is especially true in my case

since I have so much of my time taken up at the School. But I have been able to visit quite a number of places about London on Saturdays and Sundays. We came over two weeks before the opening of the School and during that time visited Coventry, Kenilworth, Warwick, and Stratfordon-Avon; also we have been to Hampton Court, Kew, and Hampstead Heath among other places. One of the interesting features of being here is that you run on places of literary and historical interest around nearly every other corner. In the street where our flat (the English call an apartment a flat) is situated the house where Dickens lived for many years is just below us; Sydney Smith's house is just across the street; Ruskin was born two blocks away;

Thackeray lived and wrote Vanity Fair nearby; and, according to the guide book, the Rosettis lived in our neighborhood, but we haven't located the house vet. And the same thing is true of most parts of London. A few Sundays ago we visited some friends who live in Well Walk at Hampstead Heath. Just across the street from them is the house where Constable the painter lived; adjoining them at the rear is the old home of duMaurier, his son the actor, Sir Gerald duMaurier, living there at present. But most interesting of all, in the road in their block is the old Well which was frequented by Shelley and Keats. And in a nearby lane is the little hole in the wall where Keats lived and starved with tuberculosis.

"The English have been very kind



We think this photograph of the perfectly healthy sixteen months old daughter of a Monroe dentist is one of the prettiest we have ever published.

to us; in fact, we cannot realize that we are in a foreign country, on the other hand we live as if we were at home. The main difference here is that the houses are old and conditions of living are not as comfortable as in the States. But there is certainly a charm in the slow quiet way of life that is lacking in the States, especially in our cities, and one is content to put up with coal and gas fires and other primitive conditions. Living, however, is much cheaper than at home.

"The weather has been very good this winter—that is, to our way of thinking. Two things you observe in the English are, first, they don't half appreciate their own country and are not the least attracted by the many places of historical interest. And secondly, they are disappointed if the weather isn't bad and rainy. This past November has been very nice, thought, as there have been not more than three mornings with the temperature below 40 degrees F. and it has been well above 50 degrees most of the time-it has not been nearly so cold as we usually have it at this time of the year in North Carolina. As for rain, there have been a few rainy days but, as a rule, the days were fair and the rain came at night. Then there were but two fogs November, one is told, is the month of fogs. As I said, it was not anything like as rough as we expected it would be; but by this mornings paper we see that it has been one of the wettest, most disagreeable months (Novembers) for several years!"

"BEAUTIFUL DAY"

By SUDIE E. PYATT

"Beautiful Day" sold more automobiles than any other auto dealer in Allboro. His cheery greeting, and his inevitable, "Beautiful Day!" while his brown eyes twinkled, regardless of what the condition of the weather really was, had won for Robert T. Mimms, the title of "Beautiful Day." Winning for him the town's title of champion optimist it had sold many an auto for the happy-faced young auto dealer that might just as easily have been a sale for the dealer across the street.

Lon Queen handled the agency for the car that in point of price ranked next to the one "Beautiful Day" sold. Lon was the town's champion pessimist, while "Beautiful Day" was its chief optimist.

When the bottom dropped out of the New York stock market last November, and the greatest slump in its history hit the automobile industry Lon Queen went about the streets of Allboro telling anyone who would listen that the country was on its way to the dogs as fast as it could go. Not even President Hoover and the Republican party would be able to save it.

The cars in his show rooms were as good cars as his company had ever made. They were priced as low as the company dare price them, considering the cost of production and competition. Despite the advertising, publicity and sales promotion ideas of his company Lon Queen had not sold a car in four months. He was convinced that never in the history of the country had business been so bad.

Lon's ideas about the rottenness of general business conditions finally seeped from his head, which was the cause of the trouble all along, down to the mechanism that digested and assimilated his food, and then disposed of the waste products. Lon's brains convinced his stomach that the world was a rotten place, too.

Consequently Lon became a chronic

sufferer from "indigestion," and all of the disorders of the digestive system that go along with that idea.

One night late in March, just before the Easter holidays conditions
in the mechanism of Lon's plant for
the production of heat, good, red
blood, body cells, brain cells included,
nerves, muscles and pep for selling
cars, reached a high climax of inefficiency, and Lon came near having
what a doctor said was an "acute attack of indigestion."

People sometimes were said to die of acute indigestion, Lon knew, and it was, indeed, a pessimistic auto dealer who crept down to his salesrooms about noon of the day the workers in his own production system had staged a near riot.

Lon was convinced that no man in the world had worse luck than he had. While Lon was in this extremely low frame of mind, a well-dressed man came into the sales-rooms, greeted Lon pleasantly and lost no time in explaining his business.

"Queen, glad to know you. Cowl, Owen C. Cowl, is my name. My firm, the Raybar Co., is opening a new branch in this territory. I am manager. Allboro is to be my headquarters. I need a good light car such as you sell to cover the territory."

"Yes," Lon interrupted his prospective customer, "but with business conditions as bad as they are now, don't you think this is a bad time to open up a new office of any kind?"

Cowl smiled, "When business is bad that's the time to start something. Your competitor usually thinks you won't start anything then, and when you do go ahead and start something you steal a march on him."

Lon dolefully shook his head. "You take a tip from an old-timer in this town, young fellow, and wait a few months until conditions are better before you begin any new business here. You couldn't have picked a worse

town in the county to open up a new business in."

"You talk as if you had a grudge against your town, or a case of chronic indigestion," Cowl grinned good-naturedly as he flung this at the man he expected to buy his new car from.

"Indigestion? Why man, you don't know anything about indigestion until you've had an acute attack as I had last night. Just a little worse, and the doctor said I might have died."

"Too bad," the young manager's eyes roamed to the window and caught sight of the display windows of Mimms Motor Sales, "Beautiful Day's" auto sales rooms. "Thanks very much for the advice, Mr. Queen. Hope the indigestion gets better, but I've just decided to buy a different kind of car."

A black frown on his face Lon watched his prospective customer cross the street to Mimms Motor Sales.

"Good morning," "Beautiful Day" greeted the stranger.

"Look here," was Cowl's return to "Beautiful Day's" greeting, "if you've got a car to sell me that I want I'm in the market for one today, and I'll pay cash, but I'll just be hanged if I'll listen to any talk of attacks of acute indigestion or hard times in town from you."

"Wouldn't bother you with any such talk for the car I'm going to sell you," "Beautiful Day's" eyes twinkled.

"All right, show me something in your best business sedan," Cowl lighted a cigarette and followed "Beautiful Day" to the car he wanted to see.

"New comer in town?" "Beautiful Day" asked, stopping a minute after his demonstration of the car's brakes.

"Yes, opening up a new branch office for my company here."

"Fine!" "Beautiful Day" was enthusiastic. "You couldn't find a better town in the state to open up a new business in, and this is a good time to be starting."

"My company thinks so," Cowl looked at the car's motor with coldly appraising eyes, "but the old bird across the street tried to persuade me everything was all wrong, and as if that wasn't enough entertained me with an account of some sort of an attack of indigestion he had last night. Guess the old fellow was so busy worrying about bad times he hadn't given his stomach a chance to function properly."

"Lines and finish of this car are the finest in any automobile of this class," "Beautiful Day" went on with his sales talk.

"All right, I'm sure the car is what I want," Cowl said as "Beautiful Day" stopped for a moment. "Have her put in shape for driving. I'll write you a check and just drive her away if you don't mind."

"Certainly is a beautiful day, isn't it"? Mimms remarked as Cowl handed him a signed check.

"Lovely!" Cowl agreed, and both men glanced out of the window where a fine spring rain was falling.

"I still contend it is a beautiful day," Mimms said.

"And I still say it is a lovely day," Cowl reached for his hat, "and business is good, this is a good town, we have no acute indigestion and no near-deaths, or deaths today."

The men shook hands over this and Cowl departed in his new car, the machine moving along at a slow, steady pace as became a new automobile.

From the windows of his office Lon Queen watched his erstwhile customer drive the shining new car from his competitor's sales rooms. That night Lon Queen did have an attack of "acute indigestion" that two doctors summoned in the middle of the night, his wife and neighbors, all

thought would be the end of Lon Queen.

Lon was white and trembly and insistently complaining of bankruptcy for the Queen Motor Co. when his daughter, Peggy, came home from her senior year in college for the Easter holidays.

"You'll have to leave college for the remainder of the term," he told her. "If conditions improve maybe you can go back for a term later and get your diploma.

Lon expected Peggy to take this as final, and probably to begin a maidenly tirade against hard times, acute indigestion that struck fathers down just when they were most needed, and "Beautiful Day," his competitor. A large part of the tirade he would like directed at "Beautiful Day," but Peggy did nothing of the kind.

"Let's see, dad," she said shrewdly, "the commission on the sale of only one car would more than keep me in college for the remainder of the year. I'm going to open up the sales rooms in the morning. If I can sell a car before time for me to return to college, back to college I go."

Lon observed his sprightly daughter, a frown gathering between his heavy brows.

"Young lady, I tell you times in this town are too hard to sell cars. Your old father has sold cars every since cars were sold here. I haven't sold a one since the bottom dropped out of the stock market in November. Don't think you're better than your old dad, do you?"

Slowly Peggy shook her short curls. "No, daddy, but one never can tell. You know you're always worried with indigestion, headaches and hot flashes, and you're always talking to folks who come in to look at cars about your symptoms and hard times. I'm going to talk cars and college slang to 'em."

Peggy was as good as her threat.

Promptly at 9 o'clock next morning she opened the Queen Motor Company's doors, doors which because of her father's illness, had been closed all week.

Her curls adjusted to just the proper degree of careless confusion about her well-formed head and her pert little nose daintily powdered, Peggy took a big cloth, which she found after considerable rummaging, and began a vigorous polishing of the exterior of the dusty coach that stood on display nearest her father's office.

"Why, good morning, Peggy! didn't know you were at home."

"Beautiful Day!" Peggy screeched in delight, dropping her polishing cloth. "And why did you forget to greet me with your favorite 'Beautiful Day'? I feel terribly neglected."

"O, Peggy Queen, forgive a man," and "Beautiful Day," gallantly handed the college girl who would be an auto salesman her cleaning cloth. "Every time I see you I'm reminded anew that queens do actually thrive and prosper in this democratic land of ours."

"Perhaps," Peggy frowned, viciously using the polishing cloth, "but I don't see much of it right now. Gosh—!" She broke off, "—I forgot you're our worst enemy, and here I am telling you secrets."

"Is there anything I might do to help you, Peggy?" "Beautiful Day" inquired anxiously.

"Oh, no," Peggy was quick on the retort. "That nice, cheerful way you have, 'Beautiful Day' just makes everyone want to tell you everything. No wonder you sell cars. I'll bet you don't have indigestion and talk it and hard times to your customer, either."

"You can just bet your pretty curls, Queen Peggy, I don't."

They both looked up as a man greeted them in the doorway of the auto sales room.

"Mr. Mimms, I believe," the man

said speaking to "Beautiful Day," ignoring Peggy.

"Yes."

"My name is Witherow. Cowl of the new Graybar Co., sent me down to see you about a car for myself. He bought one from you early this week. It's a fine car, and he says you're great to do business with."

"Beautiful Day" looked at Peggy as the man talked. The eager, hungry look in her eyes arrested his thoughts that were hurrying along the lines of a sales talk for his own car. To his own knowledge her father hadn't sold a car in four months. The girl was probably right about being neither prosperous or thriving. The Queen family evidently weren't prospering from the auto business.

Again there was that eager look, and Peggy smiled at him a slow, pathetic little smile.

Then and there "Beautiful Day" did something he had never done before. He to his own, Peggy's and Witherow's surprise voluntarily turned a prospective customer over to a competitor. Turning his customer over to his competitor was not all. He stayed and assisted in the sales talk, though Peggy didn't need much assistance once she had a prospect.

An hour later Witherow drove the car Peggy had been polishing out of the Queen Motor Company's show rooms. He had paid cash, fifty per cent, and Peggy's commission on even the fifty per cent cash paid would keep her in college the needed six weeks.

"Why did you do it, 'Beautiful Day'?" Peggy asked when Witherow and the car were gone.

"Beautiful Day" looked across the street to Mimms Motor Sales. He had a swift vision, of Peggy's hands on the wheels of the best car he sold, driving it down to take him home when the day's work was over.

"Because I've always loved you, Peggy."

"Always loved me? 'Beautiful Day' you fib!" Peggy jumped to her feet, the warm color mounting to her cheeks.

"You've known me for only five years, since you opened up your agency in opposition to dad, and we've been competitors every since we've known each other."

"Perhaps your dad, and I have been, Peggy, but not you and I."

"No," Peggy shook her short curls, "I've always sort of liked you."

With that "Beauiful Day" took courage. "Will you marry me, Peggy, after you graduate in June?"

"Couldn't put us out of business any other way, so you think you're going to marry us out?" Peggy jeered, her soft moment gone.

"No, dear," "Beautiful Day" was patient. "I'd like your dad to keep this agency as he has it, only I'd like to help him change his methods and make money in the business."

"Poor dad, with his indigestion and his hard times, he does need someone to help him."

"I'd do anything for you, dear,"
"Beautiful Day" reminded Peggy
gently.

"—Even marry me," she teased, and "Beautiful Day" took her in his arms.

If Peggy thought her father would be happy over the sale of the first car he had disposed of in four months she was mistaken. It would have been bad enough for his daughter to have sold it, but to discover that his competitor had practically disposed of the car was both humiliating and embarrassing.

His indigestion immediately reached the point of another acute attack. The doctor was hurriedly summoned. Along with the doctor, a local justice of the peace was called to see that the sale of the car was cancelled, and cancelled legally.

"Beautiful Day" should never have a chance to say that he had sold a

car for Lon Queen. Charity that's what the man was trying to give him. He wouldn't take it.

He groaned sharply, as an extra pain shot through the center of his body. Maybe this time he would die. "Beautiful Day," his contemptible competitor, and hard times would be the cause of his death. Yes, he'd be a martyr to the modern economic system.

While the doctor and the justice of the peace were being summoned for Lon, Peggy was hurrying down to "Beautiful Day." After her few breathless words of explanation "Beautiful Day" tucked her into his car, the one he had imagined her driving down for him in, earlier in the day, and they went in search of the justice of the peace.

"Sure, I understand," the man of the law said, when "Beautiful Day" and Peggy had together explained the trouble. "I'll drive to the house and mollify Lon, but I won't bother the man who bought the car."

Peggy and "Beautiful Day" followed the justice of the peace to Peggy's house. Arrived there they found Lon telling the man that he wouldn't be dictated to by a judge of the United States Supreme Court, much the less an Allboro justice of the peace.

"I'm going down and tell that Witherow man, he can't have the car," Lon announced, getting angrily out of his bed.

Mrs. Queen was standing by Lon's side, vainly endeavoring to get him to remain in bed, and the justice of the peace was helpless when "Beautiful Day" and Peggy burst into the room.

"Get out of here!" Lon's voice rose to a scream when he saw "Beautiful Day."

Peggy placed herself in front of her lover, and spoke to her father. "Dad, 'Beautiful Day' isn't going to leave until you and mother give us your parental blessings, or whatever it is parents give daughters who have just become engaged. 'Beautiful Day' and I are going to be married when I finish college in June."

Lon took one glance at his daughter, and the detested man she was going to marry and subsided groaning in his bed, his hands, clutching the midsection of his body helplessly.

"I'm going to die! They're going to kill me!" he moaned.

Mrs. Queen fussed helplessly about her sick husband. She had never been able to manage him, and admitted it.

"No, Dad, you aren't going to die!" Peggy put firm, young fingers on her father's forehead. "You're going to get out of bed, forget you ever had indigestion and such things as hard times, and together you and Beautiful Day' are going to revolutionize the automobile industry in Allboro, and make loads of money for the Queen family and the proposed Mimms family."

"Who says so?" Lon asked weakly.

"I said so!" Peggy spoke firmly.

"I want to back up the business part of it, Mr. Queen," "Beautiful Day" said. "If you'll permit me to help you I think we can make a real success of the auto business in Allboro."

Lon was silent. Through his mind ran the memory of the last four lean months. Just how near he had come to bankruptcy and his family to actual want, only he would ever know. "Beautiful Day" did sell cars. Maybe he could help him.

"What sort of business arrangements do you want to make?" he asked feebly.

"Tell you what, Mr. Queen, I want you just to lie here in your bed and rest for today. While you're resting I want you to read this little type-written booklet, and let what it says sink in."

"Yes," Lon reached for the booklet

"Beautiful Day" handed him as if he really meant business.

"This little booklet," Mimms explained contains 14 short secrets of healthful living and efficient selling to which I attribute my success as an auto dealer. Five years ago my health broke down completely. I had to go to a sanatorium for six months. While there I had time for reflection. I studied and read a good bit, and finally hit on these 14 secrets. In my case I have found them most workable, real secrets of success. I hope they will help you as much as they helped me."

Lon was already starting to read the first page of "Beautiful Day's" book of secrets as his daughter and his future son-in-law and business partner left his room.

The Secrets were as refreshingly original as was "Beautiful Day" himself. Grudgingly Lon admitted it was interesting reading.

Secret One read this way:

Whether you sell cars, real estate or lingerie you've got to talk the thing you're selling, and the person you're selling to. You can't talk yourself, and your digestive and health troubles and make sales.

Secret Two

People have enough attacks of indigestion and sleepless nights of their own without listening to more of them from the man they're buying as expensive a commodity as a car from.

Secret Three

Begin talking about your stomach and hard times when a man is trying to buy and there'll be no sale.

Secret Four

It's all right to talk about the other fellow's troubles if he insists, but for God's sake keep your own under cover.

Secret Five

If the prospect insists on talking about his health, or hard times sympathize with him, but get him off his health and the times as soon as you can, for his sake, your sake, and ing. It's his business to worry about the sake of the sale you're going to people's health. It's yours to sell make.

Secret Six

A man who talks his poor health and hard times when he ought to be talking business deserves to lose sales.

Secret Seven

If you're always talking hard times the times will be hard. Talk good times and there may not really be good times, but everybody will certainly have a better time listening to you.

Secret Eight

A man or woman can't successfully conduct a business and meet modern competition who are always talking about the poor state of their health, and who insist on always talking hard times.

Secret Nine

Have a thorough physical examination once a year from a good physician. Correct all disorders after the examination, and regularly as they appear.

Secret Ten

Have a good family physician, and if illness comes up between physical examinations go to him immediately and let him treat you.

Secret Eleven

Don't worry about your physical condition, or any ailment. Tell it to the doctor and let him do the worrying. It's his business to worry about people's health. It's yours to sell cars, or whatever you happen to be selling or doing so you'll have the wherewithal to pay the doctor, "the baker, the butcher and the candle stick maker."

Secret Twelve

Never burden your customers with your own fears whether they be of your health or the times.

Secret Thirteen

If you talk bad health and bad times, both your health and the times will be bad.

Secret Fourteen

Give everyone who comes into your place a pleasant greeting and say the day is beautiful, though it may be raining, snowing, sleeting, hailing, the legendary "pitchforks and toads" outside.

Lon had read the secrets carefully twice, when he placed the booklet on the table by his bed. At last he understood how "Beautiful Day" had earned his name, for really earned it he had.

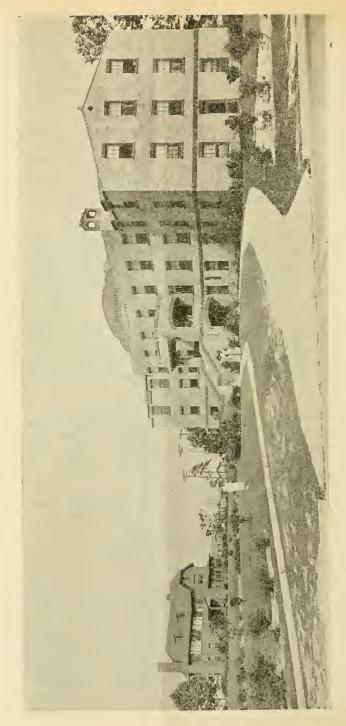
He was going to put those secrets to work Monday morning. Bet he'd sell a car, too, he thought as he dropped off to sleep. Oldest auto salesman in Cochran county, he'd show young upstarts he could still sell cars, if he did have to use his former competitor's health and business secrets to help him do it.

"RICH MAN, POOR MAN" By IRA S. WILE, M. D.

Teachers, subjects, school companions, rules, regulations, examinations and disciplines are far more important than most other elements in school hygiene. The school world has its currents and eddies, its deserts and shifting sands, its jungles and arid plains, over and through which children must swim, crawl and struggle to reach some goal that is said to be desirable. The slow and the

quick, the dull and the bright, the stupid and the brilliant, the defective and the genius, along with the crippled, the mute, the blind, the deaf, the diseased, the neurotic and the prepsychotic are seeking their levels in schools, in education and in social relationships. Children are born neither free nor equal and the schools make the truth too apparent, but often at great sacrifice of children.

THE L. RICHARDSON MEMORIAL HOSPITAL FOR NEGROES, GREENSBORO



This hospital is a new and completely equipped modern hospital. The building is fireproof. It has a competent professional staff and is ably conducted in every particular.



This Bulletin will be sent free to any citizen of the State upon request.

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APRIL, 1930

NO. 4

MAKE MAY DAY CHILD HEALTH DAY



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Catarrh Care of the Baby Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards

Eyes Flies Fly Placards
German Measles
Hookworm Disease
Infantile Paralysis
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Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Veneral Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
Infant Care (by Mrs. Max West)
Prenatal Letters (series of nine
monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Save Your Baby
Hints to North Carolina Mothers Who
Want Better Babies
Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age).

years of age).

Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months. 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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WILLIAM HENRY WELCH, M. D.

DOCTOR WILLIAM HENRY WELCH MEDICAL STATESMAN

Through the courtesy of Dr. John A. Kingsbury, secretary of a national committee formed for the purpose of celebrating the 80th birthday of Dr. William Henry Welch in Washington City on April 8, we are presenting a copyrighted photograph of Dr. Welch, who has been designated as a Medical Statesman. The celebration of Dr. Welch's 80th birthday will be held in Memorial Continental Hall in Washington, April 8. The ceremonies will include the presentation of a portrait etching of Dr. Welch, made by a celebrated artist. We are devoting this space in honor of Dr. Welch because he is the greatest living member of the American medical profession. Besides, he is one of the greatest pathologists in the world.

Doctor Welch founded the Chair of Pathology and was its first professor in John Hopkins University. He filled that chair for more than thirty years, resigning in 1918 to found the School of Hygiene and Public Health in that institution. Last year, at the age of 79, he was made the first professor of the Department of History of Medicine in Johns Hopkins. has exerted a greater influence on medical education and public health in the United States during the last twenty-five years than possibly any other man in it. Dr. Welch was present in a German laboratory at the time Robert Koch, a great German pathologist, offered the first definite conclusive proof that bacteria may cause disease. This occasion was one of supreme importance to the human

Doctor Welch had spent two years in Germany and in study in Europe while a young man, coming in contact with some of the most brilliant young students in Europe, whose names were later to become famous through out the earth. He so distinguished himself as a student while in Europe

that many years later, when the president of Johns Hopkins University followed the habit and custom of the times in proceeding to Europe search of a professor to fill the new Chair of Pathology in Johns Hopkins Medical School, in Germany he was told that there was no need for him to undertake to engage any European; that they had in New York City one of the greatest pathologists in the world, although his fame at that time had not reached the proportions it did in subsequent years. So the president of Johns Hopkins came back to New York and engaged Dr. Welch for this important post.

Thus the career of Dr. Welch emphasizes, among other things, the fact that when great things are to be accomplished, there are always available in every community or state men fully capable of undertaking and successfully executing any proposed human project. We wish for Dr. Welch many more years of health and happiness.



Out for a morning "constitutional" up in Franklin County.

AN APRIL MEDLEY

A NUMBER OF THINGS, INCLUDING "PATENT" MEDICINES, NEWS-PAPER ADVERTISING AND TESTIMONIALS FROM PROHIBITION LECTURERS

To those people who think that the patent medicine industry is either dead or in a dying condition we would like to suggest that they make some observations for themselves. First. spend a lot of time each day in looking over the advertisements appearing in the average daily or weekly newspaper. Take a rule and measure the amount of space utilized in any daily issue, say, of any morning newspaper published in North Carolina, in advertising. Then measure percentage of the advertising devoted to so-called "patent medicines." You will be amazed to see the large percentage of high priced newspaper space bought and paid for by the patent medicine industry every day. Second, take a seat by the fountain in any busy drug store, especially the cut-rate places, where they sell dollar package medicine for ninety-nine cents, and note how rapidly the shelves are thinned out of package stuff. It is almost equal to a raid on a chain grocery store in a busy hour. These things indicate that people are yet buying and consuming large quantities of the stuff sold in such atractive packages, bottles, and so on, and advertised so attractively by people who know how to exploit such things.

Along about this time of year, when the winter is vanishing and the spring and sumer is beginning to influence our feelings, the most of us revert to type and either have the spring fever feeling or we think that our blood needs purifying, our system needs clearing, or we need some kind of a tonic to make us feel better. In the sassafras tea area, where sulphur and molasses form the chief base, not much damage is done except to the feelings of the youngsters who are

forced to take on a good bit of this stuff. For most of the population, however, the dependence must still be placed in the "patents." So what more natural than for us to experience the usual human reaction when we look into our favorite morning newspaper and see a testimonial from some great man or noted actress proclaiming the cure-all qualities of one or another nostrum, all of which invariably has a fine alcoholic content.

The newspapers help these things along mightily. Naturally it is not our province to undertake to regulate the ethics of the newspaper profession, as we have a hard enough time regulating the ethics of our own profession; but some of these days we are going to write an editorial under the heading, "Advertising for Results That Cannot Be Got." That however, is another story which must wait a while longer.

Science News Letter carried a story a few weeks ago quoting a woman physician who had lived in the South Sea Islands with one of the most primitive tribes encountered in that famed area. This woman physician, on coming back to civilization, announced in her first interview that she had come to the conclusion, from living among these Islanders, that human nature had changed but little since the Stone Age. That is reputed to have been twenty to thirty thousand years ago. It is even so in the realm with patent medicine exploitation. Manners may change methods may be altered, but we are the same gullible kind of people that we have always been when it comes to listening to the siren voice of the fellow who has something to sell us, especially if he can succeed in making us believe that it is something that will benefit our health or mean money to our pockets.

A New Patent Star Appears

Sometime late last summer we noted in nearly all the papers of the State attractive semi-news articles, sometimes with the little abbreviation "advt." stuck at the bottom, and sometimes not. All of the literature concerning this new wonder in the proprietary field brought to our mind familiar memories of some fifteen years ago when Tanlac was helping support a great number of exploiters in this State. All of the matter had a strangely familiar sound. So, to satisfy our curiosity, we wrote to the Bureau of Investigation of the American Medical Association for information concerning this new star among the patents. namely, Sargon. Sure enough the answer to our inquiry revealed the secret; in fact, two of them. The communication is so interesting that we are herewith publishing the letter in full. But the two secrets, as the reader wil note, are; first, the same talented artist who made a fortune out of Tanlac is now promoting Sargon; and, second, whisper this, it contains about 17 per cent of alcohol. The American Medical Association letter follows:

"Sargon' comes in two forms, a liquid and pills. The liquid is the chief product and is simply one more of the nostrum that, apparently, owe their popularity to the alcoholic 'kick' that they contain. In this case, we understand that it is 17 per cent. In addition, the stuff contains some vegetable bitters, according to an analysis made in the Drug Laboratory of the University of Kansas. The 'Sargon Soft Mass Pills," which are recommended as a complimentary treatment, are essentially phenolphthalein—in other words, they are laxative.

"Sargon is being exploited in the ballyhoo manner that was used to advertise 'Tanlac' a few years ago. In fact, the man who is back of the stuff is the former exploiter of Tanlac."

When the reader recalls that in the balmiest days of liquor traffic in this State good strong corn whiskey contained only about double that amount of alcohol, one grand reason for the popularity of this cure-all is no longer a secret. We had only to wait a few weeks after the beginning of this fine advertising last summer and fall before the appearance of the inevitable testimonials.

Testimonial from Prominent Prohibition Lecturer and Former Congressman.

True as the Pole Star, along in January we clipped the following advertisement from the Raleigh News and Observer. Now, this advertisement is not unusual, and there would be nothing in it out of the ordinary run of testimonials, but in this case the testifier is none other than Hon. W. D. Upshaw, for eight years a member of the United States Congress,



This little nephew of the rural school supervisor of Edgecombe County is getting his share of the spring sunshine in a costume designed for the purpose.

from the great city of Atlanta, Georgia. Mr. Upshaw is not unknown in Raleigh, having appeared in this city at least one or more times. engaged in fighting the liquor traffic. Of course he was lecturing at so much per lecture plus expenses, all of which was a perfectly legitimate enterprise. To those among our readers who have heard the Congressman talk. nothing could seem to him to be more heinous in this world than the use of alcohol in any way, shape, or form. We shall not undertake to paint the lily, because anything we can say here could not approach the heartfelt testimonial of this prominent prohibition worker proclaiming the merits of a wonder medicine containing 17 per cent of pure grain alcohol. The advertisement from the News and Observer follows:

"Hon. W. D. Upshaw Endorses Sargon.

"I'm Simply Following The Golden Rule in Telling Others of Remarkable Benefits," Says Former Congressman.

"Few men in America are known to more people from coast to coast than William D. Upshaw, former Congressman from the Fifth (Atlanta) District of Georgia. During his eight years in Washington he attained national prominence. A well known national magazine described him as "the most amazing man in Congress."

"Mr. Upshaw has lectured in every State in the Union and is the author of numerous books. His home is now in Asheville, North Carolina. Most of his time is devoted to the lecture platform.

"So remarkable and gratifying were the benefits derived by Mr. Upshaw from the use of Sargon, that he recently gave it his endorsement voluntarily and without solicitation, in the following statement:

"'Obeying a grateful impulse be-

cause of the great physical blessing received, I feel it my duty to other sufferers to tell what Sargon did for me. Three experiences with it, each some six month apart, have so convinced me that it is an honest and thoroughly helpful medicine, that I am simply 'doing unto others as I would have them do unto me,' in making this voluntary statement.

"'My first experience with this remarkable invigorator came in summer of 1928, when Sargon was brand new. I was suffering from nervous debility and an alarming physical depletion as the result of over-work on the lecture platform. and really feared I would not have strength enough to get me through the political campaign of July and August. Unbelievable as it may seem, two bottles taken with the Sargon Pills simply made me over. After the most hectic speaking campaign through which I ever passed, I came out actually feeling far stronger then when I began.

"'Later, rushing away on another busy speaking tour covering several States, I did not persevere in the daily use of the medicine until my system was thoroughly cleansed, with the result that twice since then I found myself suffering from general debility, constipation and dizziness, and each time the Sargon combination has cleared me up and left me feeling tip-top.

"'Living now in the aftermath of those refreshing experiences, I am moved by common gratitude to heartily commend this wholesome and effective medicine to everybody whose run-down condition calls for complete restoration.'"

The Prohibition cause in the United States has not only had to suffer from the fanatical and selfish criticism of the wets, but it has often had the humiliating experience of discovering many hypocritical advocates among its ranks, who do not practice

what they preach. North Carolina has not only cast its official vote for the prohibition of the liquor traffic, but the State Board of Health would like to see a prohibition of so many worthless remedies, loaded with alcohol, which are sold to the people in the guise of "cure-alls."

VISUAL MINDED

In a recent letter to the Editor of the Bulletin from the chairman of the Board of Medical Picture Films of the American College of Surgeons, and from Dr. Franklin H. Martin, the Director General of the Medical Film Division, the following significant statement is used:

"Most of us are visual minded."

Come to think about the matter it is certainly a fact. Normally, everybody is visual minded. Every school teacher knows that the children who early develop their powers of obsertion are the children who make the most rapid and satisfactory progress in school.

The American College of Surgeons has encouraged the production of a series of films on medical subjects to be used in the teaching of medical students in the colleges, and also to be used in instructing physicians in the post-graduate medical schools. The Eastman Films, Incorporated, of Rochester. New York, has produced these medical films. The American College of Surgeons, of course, has no financial interest in the proposition, but their interest is confined to the most practical and intensive dissemination of medical information.

It would seem at present that the tendency is to eliminate all of the silent films, and, through what is popularly known as the talkies, the amusement film from now on is to be an admixture of talk and sound combined with the visual method. This writer is not in a position to criticise, but it does seem that confusing the listener or spectator, whichever the audience is to be designated, will be the result, unless the process is to be simply a return to the beginning

of the old picture business, which was the old lantern slide, or what was first known as magic lantern with the lecturer and his stick pointing out on the screen and describing the process step by step.

It may work out all right in this age of haste and speed. The human ear and brain may be able to accommodate itself to the excess burden which it is constantly being called upon to carry. The statement, however, of the high officials of the American College of Surgeons, that most of us are visual minded, is a statement that should be seriously considered in all schools and colleges as well as the medical schools.

The tendency of this age, of course, is to go to extremes in everything that we undertake. Those of us who read the papers will remember that only a short time ago some supposedly responsible official in educational circles in New York or Pennsylvania was advocating the use of the radio in order to eliminate the services of teachers in the schools and install a loud-speaker in each schoolroom, and to let some of the experts dispense wisdom over the radio for the young hopefuls to absorb.

This proposal is getting away from the American College of Surgeons idea with a vengeance. It is going about as far in the opposite direction as it would be humanly possible to go at the present time. We hope, however, that the methods always found dependable in the field of visual education will never be junked until something better comes along to take the place.

In the meantime numbers of the largest cities in the country are very

busy at present enacting ordinances to curb the noise nuisance. Such papers as the Washington Post and some of the great New York City dailies have recently been carrying on a voting contest in order to ascertain what kind of noises are most objectionable to the average resident. It is interesting to note that next to the raucous toot of the automobile horns the radio loud-speaker is second in objection.

It is altogther possible that sometime in the future, as population becomes more congested, that the world will have to come back, largely speaking, to the visual methods of education and communication, including the printed word, in order to preserve the sanity of the people. This statement, of course, is relative, because the vast influence of the radio will increase as the years go by, and control of the stuff that is broadcasted will have to be rigidly regulated by the Federal Government. It will have to be confined sometime to the best music and to the best of informa-



This six months old daughter of a popular Raleigh dentist is being raised according to instructions provided by State Board of Health literature. You can see for yourself how she appreciates such wise parents.

tion along educational lines of every description.

A CONTRIBUTOR SUBMITS SOME VALUABLE SUGGESTIONS

We are publishing below an article entitled "Vacation Resolutions." Mrs. Walker, the writer, writes that has especially prepared this article exclusive publication in Health Bulletin. She writes that she thinks these questions are very important for every parent to consider. She writes, not as a physician or as a nurse or as a public health worker, but as a mother of young children. Mrs. Walker is the mother of six children, ranging in age from 2 to 16 years. In her note to the Editor, submitting the article, she that "it is strange, very strange, after all that has been written on the subject of vaccines, and particularly on the subject of guarding against diptheria, how many parents there are who neglect having this done until they are compelled to do so after the child has started to school, or after diptheria has made its appearance in the neighborhood, if not in the immediate family." Again we remind our readers that this is the contribution of a parent for the consideration of other parents at this particular time. The article follows:

VACATION RESOLUTIONS By Mrs. Naomi W. Walker

Along about the first of the year we hear quite a good bit said about "New Years' resolutions," but about the time school closes we hear nothing at all said about "Vacation Resolutions," and if we happen to be "par-

ents," those resolutions are most important of all for us to make; that is, of course, if we keep them as well as just make them.

Vacation, like everything else worth while, to be a success requires fore-thought. The long summer months which our children have for their vacation, can be made for them either a source of very great good, or they may be a positive drawback to them, and even do them actual harm, and which of the two it is to be, depends almost entirely on the parents.

In the first place, after eight or nine months of continuous school, most children are more or less run down, at least they are not quite up to normal and are tired out mentally and physically and often very much "on edge," and wise parents, when school closes see to it that their children, first of all, get the rest they so much need at this time. Instead of letting them stay up much later at night, going to parties and other amusements and raising all restrictions because vacation has begun, for the first week or two at least, make them go to bed at the usual time, or earlier, and then insist on their staying in bed later in the morning until they really get "caught up" on rest. school months the children have, from necessity, had to keep fairly regular eating habits but as soon as vacation begins they seem to think they just must be eating all day long to make up for lost time, and nothing is worse for them as we all who have children know, so this is something else for parents to be on their guard against, and it is not so easy as one who has not tried it may think!

Then another important thing for parents to resolve to do for their children during the summer months is to resolve to get them in the best physical condition possible before school starts in the fall. To do this it may be necessary to have some tonsils removed, and if this needs to

be done, have it attended to as early in the summer as possible so the child can have all summer in which to recuperate. Then if there are any children who showed eye-strain at the end of the school year, have their eyes looked after before vacation is very far along, so if glasses should be needed, they can be getting used to them before they have to go to school.

It seems strange that it should be so, but in this enlightened age, in the state of North Carolina, there are still many parents who have not safeguarded their children against diptheria. If there are any children in the family who have not had the Schick test to see whether or not they need the toxin-antitoxin administered. this should be attended to at once. Then, if there are any children who have not had the smallpox vaccination, have that attended to also. Possibly there is a six-year old who will start to school in the fall, who has never been vaccinated. It would be very much better to have that done now at the beginning of vacation than to wait until school begins and then have it done and possibly have it cause the child to miss several days from school right at the beginning of his school life, or, if he doesn't actually have to miss school on account of his sore arm, he may have all his life have a feeling of resentment towards school for the discomforts he suffered at that time, with children knocking his arm and hurting him and also being away from his mother probably for the first time in his life. beginning of school is hard enough for the little fellows at best, making new adjustments and all as they have to, without the added burden of having a sore, feverish arm to contend with!

Now if our children's physical health needs looking after in an especial manner during vacation, so also does their mental health if their vacations are going to mean what they really should mean to them. Except in rare instances I do not think children should be required to study in the summer, but they should have the proper books and magazines around them, and, if left to themselves the children will do much towards adding to their own education.

Another good resolution for parents to make at the beginning of vacation is to resolve to encourage each child in the family to learn to do one thing well. That "one thing" may be any one of a number of things. One child may decide to learn to swim, another to learn some special piece of music,

another may plan to earn a certain number of Scout Badges through the summer and still another may decide to earn a certain sum of money by his or her own efforts. Whatever they decide to learn to do, if they stick to their resolutions and carry out their plans, their vacations have been far from wasted.

Then in the fall, when school time comes around again, if their parents have done their full duty, our children will be much better equipped for their school years work than they were at the beginning of vacation, and in the long run, of course, much better equipped for life.

NUTRITION STUDIES IN ELEMENTARY SCHOOLS

One of our nurses sends into this office a newspaper description ocurring in the Whiteville School News, which is presumably a column in the local Whiteville paper describing an exhibit presented by the fifth grade in the Whiteville schools this winter. We are publishing it because it illustrates the interest that is now being aroused throughout the State to an extent never known before in the question of foods and nutrition. The description of the exhibit put on by the Whiteville school children follows:

"Our Food Exhibit"

"Last week 5 A. gave an exhibit of foods. We invited several grades and their teachers. We also invited Miss Thoroughgood and Mr. Rogers.

"The room was divided into groups and a captain was appointed for each group. The groups exhibited the following foods: 'Growth and Repair Material,' 'Regulators and Food Magic,' 'Go Material,' 'Iron Foods and Bone Builders.'

"We learned that milk is the best food because it contains so many needed things for the body.

"We would like for every boy and girl in our school to eat some cereal every morning for breakfast. "We have found that eggs and vegetables make us grow and we are trying to eat more of these and less meat.

"Every boy and girl in our room is trying to drink at least one glass of water before breakfast and three or four during the rest of the day.

"We want to cooperate with Governor O. Max Gardner's 'Live at Home Week.' Why not raise our own food? In North Carolina there is enough fertile land so that we can do this. We have been discussing this in our health class and find that most of the following good foods can be grown or raised in North Carolina and a great many in Columbus County.

 Growth and Repair Material Milk, Columbus County, N. C. Eggs, Columbus County, N. C. Cheese, Columbus County, N. C.

(2). Regulators and Food Magic

Celery, a small quantity is grown in North Carolina. Most of it comes from California and Florida.

Milk, Columbus County;

Apples, a few in Columbus County, many in North Carolina;

Potatoes, Columbus County; Oranges, Florida and California; Rhubarb, Columbus County; Cabbage, Columbus County; Grape Fruit, Florida and California;

Bread, Columbus County; Lettuce, Columbus County.

(3). Go Material.
Cereal, Columbus County;
Bread, Columbus County;
Potatoes, Columbus County;
Cream, Columbus County;

Raisins, California and around the Mediterranean Sea:

Spaghetti, Italy and Southern France;

Butter, Columbus County;

(4). Iron Foods and Bone Builders.
Carrot, Columbus County;
Spinach, Columbus County;
Eggs, Columbus County;

Fruits, many fruits grow in North Carolina, but we get our best oranges from California and Florida;

Lettuce, Columbus County;

Celery, a small quantity is grown in North Carolina, most of it comes from California and Florida.

"A cow is good for milk, butter, cream and meat. It is very easy to

keep cows in the rural sections of North Carolina; because we can grow the grains on which they are fed, and we have many acres of good pasture land.

"Since grains are so easily grown here the raising of poultry is profitable. They furnish us with eggs and meat and keep insects out of the gardens.

"While too much hog meat is not good for us, we need some of the meat. We can raise the hog cheaply because he eats corn and scraps.

"The meat that we do not eat can be shipped to other states.

"We can have our own gardens and get the vegetables without going to too much expense. The vegetables that are gathered from our own gardens are fresher than those which have ben shipped from great distances.

"We are going to help Governor Gardner by eating and growing the foods that are good for us. 5 A. hopes to be a healthy grade."

A BOUQUET FROM A COMPETENT CRITIC

Sometime ago we received a letter from Miss Josephine Sharkey, of Chapel Hill, who is a specialist in the field of child study, and is therefore a competent critic who can write with understanding on the subjects that concern her as well as us.

Miss Sharkey has kindly given us permission to publish her letter. We receive almost daily letters of similar character, but Miss Sharkey's letter not ony comes from an expert but it is concise, and moreover, it is beautifully illustrated by the two accompanying photographs of little Miss Hilda Sharkey, the adopted daughter who, as Miss Sharkey says, is growing and thriving at six months of age on cod liver oil, spinach, carrots, lactic acid milk, and orange juice.

The reader will note that Miss

Sharkey points out in her letter that the Federal and State publications devoted to the dissemination of available information on the subject of public health, which includes, of course, child care and study and training, comprise information which is reliable and which may be utilized by any family in the State to advantage.

We feel grateful to Miss Sharkey for this letter and for permission to publish it just as she writes it. The letter follows:

"When giving my child study classes I have always made the point that it is not necessary to buy expensive books in order to have the best advice on food, care and up-bringing of children. Uncle Sam and the State of North Carolina are both tremen-

dously interested in the children, their greatest asset.

"Whenever I lecture I carry with me and exhibit the State and Federal booklets and explain that the best authorities in the country are paid to write them.

"I asked the members of the class in one North Carolina city to write for these publications and to have the Health Bulletin sent them so that once a month they would have a little prod and be made to think and also that they might learn of the splendid things North Carolina is doing for the health of her people. At the end of the course when a raising of hands was asked for those who had sent for Government and State publications the number was far smaller than it

should have been. Then I asked those who wanted the Health Bulletin sent them to sign up. Enclosed is the list. If you have some back numbers please sent them as it really should have started with the January issue but I have a little adopted baby who keeps me hopping.

"She's being brought up on government bulletins and she's a hum dinger. Age six months, never had a cold, weighs 19 pounds, sleeps from six till seven next morning and is crazy about cod liver oil, spinach, carrots, lactic milk and orange juice.

"I hope these people read the Bulletin when it comes.

"More power to you.

Josephine Sharkey."





Here are two photographs of the little adopted daughter of Miss Josephine Sharkey of Chapel Hill. It will be noted that we are departing from our usual custom of anonymity in publishing photographs. We do this because Miss Sharkey is a lecturer and expert in child study, and the two pictures illustrate very plainly that she is able to practice what she is preaching.

The first photograph was taken when the baby was nearly four months old. The second shows her at six months, at which time Miss Sharkey says she is thriving on cod liver oil, spinach, carrots, lactic acid milk and orange juice.

THE VALUE OF MILK IN THE HUMAN DIET

By

A. C. Kimrey, Extension Dairyman N. C. State College

Milk is not a recent discovery, neither is it something concocted by science, but it is the first food in inportance among all the foods made use of by mankind. It is the oldest food and the one and only one which has been found to be absolutely indispensable, not only to the life of man, but to all other mammal life as well. It is a food that has no substitute in the diet of the young, and without which they die. I do not find on record a single child that has lived more than a few days after its birth without having received milk in some form from some source, either the natural one, or an unnatural one. In America nearly sixty percent of the children are raised unnaturally on cow's milk. In view of this, it is easy to understand that the milk producing cow plays a tremendous part in the very beginning of the life of our people.

It is not possible to raise a child, a calf, a pig, or even a puppy dog. without milk from some source, either a natural source or an unnatural one. When milk is thought of in this connection, then one begins to realize its importance to the animal life of the world. If it were possible to take milk from all sources out of the world, the earth would be depopulated in one generation, because solely upon milk all mammal life must depend for its first food.

Some years ago Professor Oscar Erf, of the Ohio State University tried in every possible way to get calves to live and grow without milk. These calves were given every food that could be suggested as a possible one to take the place of milk. Every single calf that received no milk died in a very few days after its birth,

simply because of the fact that no food except milk can nourish the very young.

Dr. E. V. McCollum, of John Hopkins University, found the same thing to be true with reference to rats and other small animals, and he further states that cow's milk has been the greatest single factor in the advancement of man from a stage of barbarism to his present state of civilization.

Why Is Milk Essential To the Young?

This is a very natural question in the face of the facts known about milk. It has been known for ages that the young could not survive without milk, but it could only be explained by saying that milk was the food provided by nature for the nourishment of the young. It was formerly believed that the proteins, fats and carbohydrates, together with mineral matter constituted all the essential parts of a food, but some recent discoveries along this line made by Dr. E. V. McCollum of John University, and others have thrown new light on the subject and opened up a new field of knowledge foods. He finds that besides the already known constitutents of foods, there are at least three other very essential ones, which he has called vitamines. It has been proven beyond the shadow of a doubt that these vitamines are absolutely essential to human life. It is the vitamine constituent found in the fat in the milk of mammal animals, that the young child must have or else it dies. This particular vitamine is known as the fat soluble one since it seems to be dissolved in, or at least closely associated with milk fat.

Is This Vitamine Not Found in Other Foods Except Milk?

It is found in a few other foods in limited quantities, but the nature of all the other foods in which it is found is such that they cannot be eaten in sufficient quantities and digested by the very young, and therefore the vitamine content is not available for their use. The other two very essential vitamines are also found in milk and are known as the water soluble ones. Investigation shows conclusively that without these vitamines animal life cannot exist. In addition to these three there are two other more or less essential vitamines-one of them found in milk and the other widely distributed in the various cereals.

Besides being the only food that can stimulate and start the young child to grow, milk is also an important and essential food for the use of a child during its growing period. In order that the bones can properly grow and develop, a good supply of lime and phosphorus must be available in the food. These minerals are found in milk in just the form best adapted to the use of a growing boy or girl for bone building. Without a good supply of whole milk and sunshine the bones fail to develop and a disease known as rickets is generally the result, in which the bones often bend under the strain of trying carry the load of fat and muscle placed on a weak and insufficient bony structure. When this condition of the body is brought about, tuberculosis and other diseases very often hold.

Not only is milk a valuable and indispensable food to promote growth, but being the perfect food that it is, it enables the grown person as well as the child to keep up the body vigor and thus be better able to resist and throw off the various disease germs, which we come in contact with daily. Good physicians invariably prescribe milk as the chief food for people who are suffering from tuberculosis, because they know that the most nourishing food possible must be supplied, and that at the same time it must be a food easily digested. Milk meets these requirements as no other food does. If it is so valuable as a means to arrest the disease, it is certainly reasonable to suppose that it will at all times help the body to resist the attack of the disease.

In sections where milk is neglected in the diet a great number of people are found suffering from pellagra. This disease is rarely, if ever, found among people who consume an abundance of milk.

The United States as a whole consumes about one pint of whole milk per person per day. Thirteen of our southern states taken together consume less than one-third of one pint per person per day. What are some of the results? The south has a very high death rate from tuberculosis and pellagra, due so physicians tell us, to a great extent to a scanty milk supply.

During the recent war when young men were being drafted into the army. from all parts of the country, it was found that a larger percent of young men in the Southern states were unfit for military service, because physical reasons, than was the case in other sections of the country. A great part of this is traceable to undernourished bodies during the growing period, and the undernourishment was chiefly due to a lack of milk. The child that grows up without a good supply of milk will be undernourished, and is destined to be a partial cripple, either physically or mentally, and possibly both.

There are thousands of boys and girls in the schools all over this country who are dull, listless and inefficient because they are not given a diet in which milk is used freely. The child whose breakfast is made up chiefly of meats and bread, washed

into the stomach with coffee or tea, cannot do good school work that day and ought not be expected to. The children who do the best school work are invariably the ones that are the best nourished and good nourishment is impossible without a reasonable amount of milk in the diet.

In the whole history of the world, no nation has ever amounted to much, as measured by its literature, learning, art and its contribution to civilization, that did not have milk cows and consequently plenty of milk as a part of the food for its people. The nation that has been a world power in any era of history has always been a nation of milk drinking people. If this is true of the nations, and it is, it may be true among the states of a nation, or it may be true to a greater or less degree with respect to the families and individuals that compose a state.

Because milk is not chewed, people are prone to think of it as a beverage to satisfy thirst and not as a food. It isn't a beverage, but instead is a real food in every sense of the word. As an aid to banishing the beverage idea from the mind, it might be remembered that a quart of whole sweet milk is equal in energy food value to either of the following amounts of food: Two pounds of fish, four-fifths of a pound of pork, three-quarters of a pound of steak, or eight eggs of average size.

It is possible to dispense with many of the foods that we are accustomed to consume, and which we like, without suffering any ill effects whatever, but if we permit the use of milk, even in the diet of adults to fall much below the present consumption, its effects will become apparent in our national efficiency. It is the concensus of the opinion of careful investigators and competent dietitians that nature intended that the growing child should live largely on milk, eggs, and the leaves from certain vegetables, but because many mothers do not follow this plan of nature in preparing the meals for their children, and because the schools have not put forth as much effort to teach children what is best for them to eat as they have to teach them Latin and other classics, the result is that there are millions of undernourished children in America today suffering from various diseases as a result of malnutrition. No wonder that in the early record of the history of man we find that when an ideal land was to be described, "a land flowing with milk and honey" as the most fitting and tempting expression that could be thought of.

It is nothing less than criminal to deny the growing child an abundant supply of wholesome sweet milk; to deny it is to cripple the body and weaken the mind, thus paving the way for a career that can never be what it might have been.

Let us, as intelligent North Carolinians strive to so raise our children that they may grow into stronger people than their parents, and thus be better able to battle for their place in the world. This can only be brought about by proper nourishment, and proper nourishment is impossible without milk.

THE CONTROL OF MEASLES A SIMPLE NEW METHOD FOR PHYSICIANS

At last, after years of study, we seem to have arrived at a point where measles, that most prevalent of children's diseases, may be to a considerable degree controlled. The procedure is extremely simple and so safe and effective that we urge all physicians to adopt it.

The Virus of Measles
For years laboratory workers in

various parts of the world sought to isolate the specific germ of measles, in the hope that once this were accomplished, a vaccine or serum could be devised for dealing with the disease. These studies, however, have been fruitless. To be sure, the work of Kektoen in 1905 and of Anderson and Goldberger in 1911 showed that the virus of measles was present in the patient's blood and in the catarrhal secretions of the nose throat a day or two before and several days after the appearance of the rash. Anderson and Goldberger also showed that the virus would pass through a Berkefeld filter. All experiments by various authors to produce measles by inoculating the desquamating epithelium into susceptible children have failed. In other words, the virus appears to exist principally or solely in the blood and in the nasal and buccal secretions. Thus far, however, all attempts to isolate the virus in pure culture have failed.

Difficulties in Controlling Measles

The long incubation period of measles (usually from twelve to eighteen days), the fact that the disease is highly communicable during the pre-eruptive stage when the nature of the disease is not recognized, and the universal susceptibility of humans to infection, have heretofore rendered all efforts to control the disease by administrative measures well nigh futile.

The Use of Convalescents' Serum

In 1916 Nicolle and Conseil published the first definite results on the treatment and prevention of measles by means of serum obtained from convalescents. The serum is most active between the tenth day and third month of convalescence. About 5 cc. of this serum is sufficient to protect a young child against measles. The immunity, however, being passive, soon wears off and cannot be depended upon for more than a few weeks.

Following this work, Park and

Zingher took up the study of convalescents' serum. They injected 41 recently exposed children, i. e., those coming in contact with cases of measles. Twenty of these were given 8 cc. of the serum and none developed measles. Twenty-one received 4 cc. of the serum and three developed the disease.

The Use of Whole Blood from Adults

In 1920 Degkwitz, of the University of Greifswald, Germany, announced the results obtained by himself and associates in the use of adult blood in more than 1,000 cases. These results were very favorable, for even where the disease was not prevented, the injected adult blood lessened the severity of the attack.

These observations have been confirmed by extensive investigations carried on during the past few years by Park in cooperation with various well-known pediatricians in this city, in the course of which the relative value of convalescents' serum and of adult blood was carefully studied. Recently, for example, Dr. Alfred Hess used the convalescents' serum and the adult blood in a large institution for children, giving one portion of the exposed children the adult blood and the other portion convalescents' serum. The children receiving the serum developed fewer cases of measles, but those receiving the adult blood had modified measles. The latter outcome is preferable because those in whom measles was absolutely prevented developed no lasting immunity, after one month were again liable to contract the malady, while the children who had modified mild attacks were rendered immune to measles for life.

Measles in Non-Immune Populations

In this connection it is well to remember that measles is a malignant disease in virgin soil. Thus in the Faroe Islands where there had been no measles since 1781, and where the disease was reintroduced in March,

1846, out of 7,782 inhabitants 6,000 were stricken. Similarly when measles was first introduced into the Sandwich Islands in 1775, within four months 40,000 persons died out of a population of 150,000. In 1874 a similar instance occurred in the Fiji Islands where one-fifth of the population died of measles introduced from Sydney. During the war measles often ran a severe course among nonimmune recruits coming from rural districts where they had never been exposed to the disease.

The New Method Now Advocated

On the basis of the experiences of the past ten years, and especially because of his own extensive investigations, Park now advocates the use of whole adult blood in a city-wide campaign for the control of measles. The technique of collecting and injecting the blood is extremely simple, and the most suitable donor is always one of the parents. The blood is collected in a sterilized glass syringe having a capacity of 30 cubic centimeters, and is most readily withdrawn from a vein at the elbow. The skin about the donor's elbow is cleansed in the usual manner and may be disinfected with iodine. A piece of rubber tubing wound around the upper arm causes

the vein to distend so that it may readily be pierced by the sterile needle attached to the syringe. Thirty cubic centimeters are withdrawn and half of the blood is then injected intramuscularly into the child's right buttock and the other half into the left buttock. Coming directly from the parents no deleterious effects need be feared. If only a 20 cc. syringe is available, two drawings of blood are made, each one 15 cc. This is a detail which presents no difficulties.

While this dosage holds good for children under five years of age, it is advisable to use double the amount in older children. It must be borne in mind, however, that the object is not to prevent measles entirely, but to permit the development of a modified, milder type of disease. For this reason it is not advisable, even in older children who have been exposed to measles, to give more than 60 cubic centimeters of the parent's whole blood.

It is hoped that physicians will familiarize themselves with this method of controlling measles and will immunize all children encountered in their practice who have been exposed to the disease. — New York City Health Bulletin.

THE USE OF IMMUNE HUMAN SERUM FOR THE PREVENTION OF MEASLES

Bu

C. C. Hudson, M. D., City Health Officer, Greensboro

The first recorded use of human serum for the prevention of measles dates back to 1916 when Park & Zingher, of New York City, reported the successful use of serum from convalescent measles cases for the prevention of measles in young children in certain hospitals in New York City. Nicolle and Conseil, of Paris, also re-

ported successful results from the use of convalescent measles serum during the same year. In 1926 Park and Freeman reported the results secured on 1500 patients by the use of serum from convalescent measles patients, and thus established this as a definite prophylactic measure. A number of other physicians have reported

good results from the use of serum since that time.

In considering the use of serum from convalescent measles cases, we must first decide what we desire to accomplish with it. It is possible to either protect the child entirely against measles or to allow the patient to have a very mild type of the disease. If the child is entirely protected it may develop measles at a later date, as human serum, like horse serum, only gives a temporary protection. To secure complete protection it is necessary to give the serum during the first five days after exposure. By giving the serum between the 5th and 6th days after exposure the patient will have a modified type of measles with a very slight cough, if any, and a mild, convalescent eruption. The disease is apparently free from danger, and it will be protected from measles for the remainder life the same as though it had had a severe case of the disease. It is impossible to tell just when a child has contracted measles, even though it may have been exposed to the disease. A rather large percentage of children given serum between the 5th and 8th days after first exposure will be completely protected.

Blood for securing serum may be taken from persons who have measles as early as seven or eight days after the fever has subsided. Blood contains most protective substance from that time until the 15th day, but may be used until the 60th day. Even after the 60th day the blood undoubtedly contains protective substances, but it is necessary to give it in a much larger dose in order to secure protection than when serum is taken soon after recovery from measles.

In securing blood for serum it is of first importance that a very careful physical examination be made of the individual to ascertain whether or not he is suffering from any other communicable disease, especially syphilis and tuberculosis. It is very difficult to secure serum from children under ten or twelve years of age and most of the blood will be taken from children between ten and twenty years old. This is undoubtedly the healthiest age and by having the donors given a careful physical examination checking the history for syphilis with the family physician and then giving a Wassermann test it is possible to almost eliminate the danger from disease being transmitted in the serum. The Chinosol or other preservative used also has an antiseptic and helps to eliminate the danger of passing along a disease in the serum.

Blood for securing serum is drawn through a 16 gauge Luer needle into a 50 cc. or 100 syringe into which has been placed 2 cc. of a twenty-five per cent solution of sodium citrate to prevent coagulation. It is possible to secure 200 to 500 cc. of blood from one donor at a time. The blood is then placed in a Florence Flask and .3 to .5 gram of Chinosol to each 500 cc. of blood is added as a preservative. More Chinosol may be used if desired as it is apparently non-irritating. The flasks are then placed on ice and the clear serum withdrawn the following day in a 50 cc. pipette, after which the blood is centrifuged and more serum secured. From 100 cc. of blood it is possible to secure about 50 cc. of clear serum. All utensils used to secure blood and serum must be thoroughly sterile and it must be handled in an aseptic manner. It is usually best when withdrawing blood to have the donor lie on an ordinary operating table with a screen of some kind over the arm. The blood is taken from one of the large veins at the elbow.

After the serum is secured it is placed in sterile 6 to 10 cc. ampoules. Tests are made to determine whether or not it is sterile. If it has been

handled in an aseptic manner and sufficient preservative used, it will retain its protective substance for a year or more.

Immune human serum should be used as a protection for all small children who have been exposed to measles, especially children who are suffering from malnutrition or who are debilitated from other diseases. As about three-fourths of all deaths from measles are of children under 3 or 4 years of age, it would seem that all children at that age should be given a dose of serum if exposed to measles. The best time to give it is probably between the 5th and days from exposure, thus allowing the child to have a mild type measles but protecting it against severe complications which cause death. Where there is a previous case measles in the home we can consider that all children in the home have contracted measles at least three days before the eruption appears in the first patient and that serum should be given to the babies in the home on the 2nd and 3rd day after the eruption of the first case.

The dose of serum depends to a large extent upon the time at which it is taken and the age of the child. Children under three or four years of age will usually be protected by a does of 6 cc.; older children should be given 10 or perhaps 12 cc. If a serum is secured from a patient who has had measles only two or three weeks, this will usually protect other children, but if the serum is taken from children who have had measles 50 or 60 days it is advisable to give a somewhat larger dose in order to secure protection.

Another method of protecting children against measles is by the use of whole citrated blood. This may be used in essentially the same manner as serum with the exception that 20 or 30 cc. of blood are withdrawn from

the donor into the syringe to which has been added the sodium citrate and this is immediately injected into the child to be protected. Any physician can use this method to protect the small children in the home.

In order to secure an adequate supply of immune measles serum, it is necessary that all physicians in the community cooperate. Each physician must be on the lookout for healthy individuals who may act as donors, most of whom will be among patients more than 10 years of age. As only 19 per cent of measles cases are under 4 years of age and about 23 per cent occur in individuals 10 years of age, or over, it should be possible to secure sufficient serum to immunize all the children under 4 years, provided all physicians secure the cooperation of their older patients. If a central laboratory is available, the patients may be sent to the laboratory for the withdrawal of the blood and the preparation of the serum, which may then be stored for future use by any physician needing it. The family physician should always check the family history of the patient and he should then be given a careful physical examination before the serum is withdrawn. It is advisable that small fund be available with which to pay a small sum to those individuals contributing blood. The serum could probably be sold for enough to cover the expense.

It is necessary that considerable publicity and education work be done in order to let people know that their children can be protected against measles, and that the disease is particularly dangerous for small children. This enables the physician to get into the homes to treat all the first cases and to give protection to the smaller children. It is especially important that it be emphasized that every case of measles should be under the care of a physician if best results are to be secured.

EPIDEMIC MENINGITIS

EDWARD L. BAUER, M. D.

Professor of Children's Diseases, Jefferson Medical College; Immunologist to the Department of Public Health, Philadelphia

Meningococcic meningitis is present in this community almost constantly but is epidemic only in occasional years. The organism causing this disease is the diplococcus intracellularis of Weichselbaum. It is found in the nasopharynx of some healthy individuals, that is in carriers, and in the nasopharynx and the blood circulation of sufferers with this malady. The organism belongs to the gram negative group.

In epidemics where contact with carriers is extremely close, ventilation poor, and sanitation bad, direct transmission is doubtless operative. On the other hand, numerous observers with large clinical experience have noted that these cases treated in general hospital wards and without any particular precautions being taken have not been the source of secondary cases. Again, a carrier will infect a number of people using a swimming pool, but will not infect other contacts who have not joined in this pastime.

Infection occurs through the nasopharynx and studies in the army during the World War would indicate that the organisms are taken up by the blood stream so that a systemic infection occurs prior to their passage into the ventricles through the choroid plexus. In children the period of systemic infection before involvement of the meninges must be short indeed, really a matter of a very few hours. It is important to remember the portal of entry into the cerebrospinal canal.

The disease is ushered in with fever, prostration, then stiffness of the neck. This rigidity is followed by retraction of the head. Opisthotonos oc-

curs later. Convulsions may occur at any time during the illness. Nystagmus or ocular muscle palsies may be present. Kernig's sign is usually found. These and other neurologic signs vary in given cases. Particularly is this true in children and certainly in infants. When vomiting occurs it is usually projectile. Petechial hemorrhage into the skin occurred in 30 per cent. of the writer's cases.

The blood count shows a leukocytosis of 20,000 to 40,000, with a predominance of polymorphonuclear leukocytes. Cerebrospinal fluid is cloudy and contains a fibrin or more frequently pus. Globulin will be found but little or no sugar is present. Cells are increased, the polymorphonuclear predominate, and the organisms are found intra and extra cellularly.

The diagnosis is made on the clinical evidence of meningeal irritation, the diagnostic tap, and is clinched by the identification of the organism.

A Specific Remedy

A specific remedy is available in meningococcic meningitis. Antimeningococcic serum is antitoxic and bacteriocidal but only for the particular type from which the serum has been made. Consequently while concentration of serum is desirable a polyvalent serum should be used, at least until the offending type has been identified by an agglutination test.

The site of injection should be as near the portal of entry as possible. The most favorable point for the injection of the serum is into the cisterna magna. This point of entry has many advantages over the lumbar route. In the first place the fluid will

be cloudy and organisms will be recovered earlier than via the lumbar down Secondly, drainage through the spinal canal is more rapid than occurs when introduced in the lumbar region. Thirdly, concentration of the serum is greater where it is needed most when given through the cisterna. Fourthly, in a large number of cases blocking occurs in the foramina of Luschka or Magendie. Lumbar injection will never get above these points. The intravenous use of serum is of no value without the introduction of serum directly into the cerebrospinal canal, by reason of the fact that it is too greatly diluted.

Antimeningococcic serum should be administered at eight-hour intervals, the dose being determined by the amount of fluid removed under pressure, but care being taken that the pressure is reduced even after the introduction of serum. The serum should be used until the temperature is normal and the organisms have disappeared from the fluid. Cloudiness of the fluid is no criterion because the serum

itself will becloud the fluid for some time after its injection.

The mortality from epidemic meningitis without the use of serum ranges from eighty to one hundred per cent. With the serum treatment it now stands at twenty to forty per cent. The reduction of this mortality depends upon the early use of the serum, the speed with which the serum of proper type destroys the organisms, and phagocytosis. This is aided materially by the use of the cisternal route.

The sequellae of epidemic meningitis may perhaps be reduced in number by the early use of serum. Internal hydrocephalus, deafness, blindness, paralysis, feeble-mindedness, or idiocy may follow in the wake of meningitis. These cases are utterly hopeless after the damage is done and if the lives of the unfortunate victims of this malady are to be saved at all it is to be hoped that early, prompt and vigorous specific serum therapy will save them from these aftermaths.—

Philadelphia Health Bulletin.

POINTS TO BE CONSIDERED IN CASE OF A POLIOMYELITIS EPIDEMIC

Bu

J. P. LEAKE, Surgeon, United States Public Health Service

In connection with plans to combat and to care for an epidemic, one of our first concerns is the recognition of an approaching outbreak. The Public Health Service is analyzing the figures available from that point of view, and at present it may be considered that throughout the greater part of the country we may expect about 1 paralytic case per 100,000 population between the 1st of December and the 1st of June each year, and in the other six months about 4 to 14 cases if the reporting is very thorough. The maximum incidence, an average

of 2 cases in three weeks per 100,000 is reached in mid-September.

Ever since 1916 we have looked with especial concern on a definite rise during the month of June, but there have been several examples of a notable increase in reporting which was not paralleled by any such actual increase in incidence. In the warmer parts of the United States fewer cases occur, though the distribution follows about the same proportion by seasons as in the North. On the Pacific coast the rise appears to begin a few weeks earlier and to reach a less

abrupt peak somewhat later, with a relatively high prevalence maintained longer than is usual elsewhere. It would seem that other places which have a comparatively even temperature range throughout the year, with a slightly retarded maximum, should show the same characteristics.

All recent information has only emphasized the view previously expressed that not much in the way of prevention can be expected by too rigid or prolonged quarantine of the reported case.

Every facility and encouragement should be given to early reporting, and the affliction of such an infection should be mitigated as much as possible in families where it occurs. The usual quarantine of three weeks from date of onset is reasonable in that the patient should be kept absolutely quiet for that length of time. Many of the cases of supposed secondary infection turn out to be simultaneous infections, and the incubation period is more likely to be two weeks than less than one week in length. There is some evidence of infectiousness during this incubation priod, but I see no reason for retracting the opinion that the disease is spread largely by healthy carriers—acute carriers rather than chronic-and by human contact rather than by food or water supplies. It has been proved poliomyelitis has no necessary connection ,with summer insects. Contact includes infection by way of mouth (though wholesale infection of a food supply appears to be rare), and we should remember that the initial symptoms are likely to be referable to the digestive tract in the unrecognized cases.

The only measures through which we should expect any real diminution of incidence are those which diminish human contacts in general, but the drastic closing of all places of assembly is justifiable only early in the season with a very high incidence of,

say, five or ten times the usual, and even in such a case the long incubation period would make it likely that in a restricted community the actual spread of the infection had begun to diminish before the alarm was sufficient to resort to such extremes.

Every help should be given to the medical profession and the public to aid in the prompt and accurate diagnosis of the cases. Pamphlets are available for distribution to physicians to refresh their memories on the early suspicious and characteristic signs of the disease.

Organization for treatment of preparalytic cases by convalescent serum is one of the first measures to be considered. Since, however, this is adapted more for metropolitan areas than for widely scattered settlements, it is probable that in most cases it will be a function of medical societies, medical schools, and local health authorities rather than of the State. There are measures of support and coordination in this mode of treatment, however, which may well be undertaken by the State department of health. In case, favorable as the results appear to be, we must remember that the method is still on trial, and every effort possible should be used to secure its practical evaluation.

Probably the greatest good that the State department of health can do is in the prevention of deformities and crippling as an aftermath of recognized paralytic cases. The early treatment should certainly be under the control of the local physician. In connection with the circularization and publicity, to aid in the early diagnosis, emphasis should be placed on the necessity of absolute and prolonged rest in bed, in a position to forestall and prevent any tendency to deformity, by fixation if necessary. There comes a time in practically every case, however, and it may come very soon, when the proper care becomes too irksome for the family to carry

without the moral support and stimulus of some such agency as a consultant orthopedist with nurses physiotherapists particularly skilled and trained in this disease; and it is a rare family which can afford the expense of such prolonged, continuous, and special skill unless the treatment is supervised under some such auspices as thoe of the State or municipal department of health. Adequate hopitalization of these cases is out of the question. One especially useful aid is the pamphlet on muscle training by Miss Wilhelmine C. Wright, which is now available as a reprint from the Public Health Reports. Since paralysis of the lower limbs is the most dangerous form as regards permanent crippling, I would also mention a useful short article on crutch walking, by the same writer, in the Annals of Surgery for December, 1926.

In closing, I would urge that both of these programs—that for the distribution, use, and evaluation of convalescent serum, and that for aftercare and muscle training—be made permanent, for if they are not organized until an outbreak becomes apparent half the damage will have been done before the machines begin to function.—Public Health Reports.

THINGS THAT CAN BE ADDED FOR HEALTH AND EFFICIENCY

"Putting First Things First" was the subject of the Sunday school lesson last Sunday. The Golden Text, as many will remember, was "seek ye first the Kingdom of God and His righteousness and all these things shall be added unto you." Near the close of our class, some of the men present became engaged in a discussion of "needless worry" which subject became very interesting and lasted until long after the assembly bell had rung. After the discussion had gone on for some time, one of the men present who had been quietly listening opened his mouth and threw some very interesting light on the subject. He is well educated, a thorough student of the Bible and an ordained minister of the gospel. said that while he was a firm believer of spiritual power and influences, he was sure that a great deal of man's worries, or that state of mind often called "blues," is due to his physical condition.

The spiritual, mental and physical parts of man are so closely related that they are bound to influence each other backwards and forwards; and there is no doubt in our mind that an unclouded spiritual outlook is an aid even to those who are heavily laden with physical cares and ailments. However, one can not get away from the fact that one's physical condition has a great deal to do with his temperament.

And the physical condition has a great deal to do not only with one's temperament, but with one's efficiency. This brings us to something that can not be stressed too much at this time: More and better gardens for better health and efficiency.

The health authorities tell us and there is little need of argument to make us understand, that one of our greatest needs is a well balanced diet and that nothing is needed so much in this section of the state as plenty of fresh vegetables. Pellagra and other dreaded diseases, we are told, are caused by lack of fresh vegetables in the diet. But in addition to that, there are no doubt, many farm hands, and others too for that matter, whose efficiency as workers is cut off because of a lack of the proper food. They may not appear to have developed any

definite disease, and yet the lack of proper balanced food is making them fall short in energy. They are slow and droopy.

This editor had a conversation a few days ago with Miss Millsapps, home demonstration agent of Scotland county, where a movement is now on to encourage the planting of a garden by every farm family, especially among the tenants who have heretofore paid too little attention to this important item. Miss Millsaps says that the landlords who are cooperating heartily in the movement will see to it that each tenant plants his own garden ,and some landowners in Scotland have suggested that they intend to force their tenants to make a garden by withholding the weekly ration or advances until they have worked their gardens.

This newspaper has been emphasizing the importance of the family garden a great deal lately and we believe it is something in which every citizen should be interested. But perhaps the most can be done in this direction by the landowners themselves. It will not only be to their interest, economically speaking, to get their tenants to growing good gardens, but it will make for better health and save lives. First things should come first, but although first things are of first importance, many secondary things are so important that a person in full possession of the first things can not resist the appeal that is wrapped up in the need for these secondary things. Perhaps this is one way to explain "all these other things shall be added. . . . "-The Scottish Chief

The dogs have rabies, rabbits have tularemia, parrots have psittacosis, and we'll bet a nickel the goldfish and canaries will be to blame for something.—Reidsville Review.

ENDEMIC TYPHUS FEVER

We are publishing elsewhere in this issue of the Bulletin an interesting paper on the subject of Typhus Fever, read by Dr. John H. Hamilton at a recent meeting of a county medical society. Dr. Hamilton himself says in his paper that "endemic typhus apparently is a small public health hazard." He goes on to say, however, that "the patients undoubtedly feel differently about this, for they are miserable and wretched during the course of the disease." We mention this in order to forestall any criticism that may be directed at us for utilizing the space in the Bulletin to discuss a disease that is comparatively rare in this State, and which the author himself states is of small importance from a public health standpoint. We feel amply justified in publishing this paper for several reasons. In the first place, it is a historical document of great interest to medical students, physicians, public school teachers, and libraries. Another reason is sooner or later nearly every physician practicing in the State will probably run across a case of this disease, or the Brill's Disease, which is so interestingly discussed in Dr. Hamilton's paper. Another reason is that with the rapid intercommunication throughout the country and especially for the people of North Carolina with the states of the southwest bordering Mexico, it will become easier in the future for the Mexican form of the

disease to be conveyed into North Carolina. Finally another important reason is that it is often rather difficult to distinguish endemic typhus from other diseases of very great importance from the public health standpoint. The article is well worth a careful reading, and we believe every one who reads it will find it to be an hour well spent.

TYPHUS FEVER

By

JOHN H. HAMILTON, M. D., Health Officer, Wilmington

Tyhus fever has a long and colorful history. It has turned the tide in wars, influenced the destiny of nations, caused heated quarrels in the medical profession, and now rebels in being placed in the sepulchre prepared for it.

Vaughan's Epidemiology and Public Health is authority for the ment "Some medical historians are satisfied that they find evidence of the existence of typhus fever among the ancient Hebrews and their contemporaries, but this is a matter of conjecture In his book on epidemics, Hyppocrates describes cases which are certainly suggestive typhus fever. ---. The great pestilence which devastated Athens and which was so well described by Thucydides, was either typhus or the pneumonic form of plague. - Livy and Tacitus described many epidemics in the classical period of Rome. Some of these were undoubtedly epidemics of the plague, while descriptions of others suggest typhus. During the Dark Ages, medical science was so overshadowed by credulity and superstition that the records of that time are of little value. In the seige of Granada in 1489, no less than 17,000 of Ferdinand's soldiers died of fever which was designated as 'tabardillo' on account of the spots appearing on the skin. This term still remains as one of the Spanish names for typhus fever. In the Sixteenth century two Italian physicians, Fracastorus Verona and Cardanus of Pavia describe typhus fever so plainly that there can be no doubt about the disease which then prevailed. In four years (1550 to 1554) it is said that more than one million people in Tuscany were destroyed by typhus."

Wars in the 16th and 17th centuries both disseminated and nurtured typhus. In 1566 it appeared in the Army of Maximillian 2nd in Hungary and spread over the greater part of Europe. It was so prevalent in the jails of England during the 16th century that it was called jail fever. Not only were prisoners infected but court attendants as well. Both medical and lay writers in prose and in poetry depicted the scourge of typhus associated with the famine and pestilence accompanying the Thirty Years War, 1619 to 1648.

During the 18th century, there was no abatement of the epidemics of typhus. The disease had afflicted Ireland for years, although there were no permanent records kept of its ravishes until 1708. Under the name of Irish Ague, it collected its toll by repeated epidemics for more than a century and a half. Want, poverty, and typhus were characteristics of the time.

To quote again from Vaughan: "It is interesting to know that during the 18th century, English physicians for the most part were not much concerned with the poor and many of them saw but little typhus, while colleagues, busy among the poor saw much of it. A Doctor Moss, writing

of the disease in Liverpool, stated that typhus was rare, while at the same time and in the same city, a Dr. Currie was seeing more than 3,-000 cases a year. In 1790, Liverpool was the second city in England, with a population of 56,000, while that of London was estimated at 800,000. According to Currie, 7,000 of the people of Liverpool lived in cellars and 9,000 more in backhouses with small courts and with narrow passages into the streets. In ten years (1787 1796) 31,343 cases of typhus were registered, an average of 3,124 per year. In the last quarter of the 18th century, Chester was regarded as the most desirable residence city in the Kingdom. Within the walls, it had a population of about 3,500 and from 1764 to 1773, the death rate was only 17.2 per thousand, but the poor lived outside the walls and Haygarath describes the condition as follows: 'The houses were small, close, crowded and dirty, ill supplied with water, undrained, and built on the ground that received the sewage from within the walls. The people were ill fed they seldom changed or washed their clothes; when they went abroad they were noisome and offensive to the smell-In these poor habitations when one person was seized with the fever, others of the same family are generally affected with the same fever in a greater or lesser degree.'

"The second half of the 18th century saw the great manufacturing development of England due to the employment of machinery. During this time the poor were exploited by the manufacturer. The houses occupied by the operatives are said by Ferrier to have been dirty, without ventilation, and the beds almost touching. 'As soon as one poor creature dies or is driven out of his cell, he is replaced by another generally from the same country, who finds in his turn the consequence of breathing infected air.'

"Practically the only voices heard in behalf of the poor were those of the medical men, and in Manchester, Ferrier pleaded for them in strong language, from which the following quotation is made: 'I have seen patients in agonies of despair on finding themselves overwhelmed with filth and abandoned by everyone who could do them any service. ---. The situation of the poor at present is extremely dangerous, and often destructive to the middle and higher ranks of society. ---. The poor are indeed the first sufferers, but the mischief does not always rest with them. By secret avenues it reaches the opulent and severely revenges neglect or insensibility to the wretchedness surrounding them.'

"It was the fact that typhus occasionally found its way into the midst of the rich, and, when it did, killed so many and so quickly that they were compelled to recognize that the misfortunes of the poor were of concern to themselves. Finally, in a halfhearted way, urged by physicians, growling about the wastefulness and improvidence of the laboring classes and driven by the occasional deadly outbreaks in their ranks, the ruling classes began to provide special hospitals for the isolation and care of cases of typhus. The London Fever Hospital was established in 1802."

Although war had done much to provide favorable conditions for the spread of typhus, it has also thrown light on the true causes of the disease. Vaughan states: "Epidemiological history of Britain during the Napoleonic wars presents many points of interest. Food prices were high. For a time American markets were closed to the British manufacturers. Still. the period (1803 to 1816) was comparatively free from typhus, so far as Britain was concerned. In peace the poor man's business is to serve the rich, clothe himself in rags, rear his family in a sty and eat nothing.

In war he becomes a hero, the defender of his king and country. He is well clothed, well fed, and all that is asked of him is that he die for his country, if need be. The wife and children at home must be cared for because the man at the front must be contented and more soldiers will be needed.'

"Immediately after the declaration of peace (1816) typhus began to increase and within another year it took on epidemic proportions."

Typhus was probably first introduced to the North American continent by the conquest of Mexico in 1530. There it has occurred in both endemic and epidemic forms ever since. It retains its Spanish name "tabardillo."

Typhus fever has never attained serious epidemic proportions in United States. There was a small outbreak in Philadelphia in 1883 and New York experienced a small epidemic in 1891 and 1892. One of the recent epidemics in this country occurred in 1916 at Fort Madison, Iowa, and was reported by Boyd. This epidemic started in a camp of Mexican railroad laborers. There eight cases including a physician and three nurses in the hospital. Effective delousing checked this outbreak immediately.

In the years 1900 and 1919, there were 109 deaths from typhus reported in the registration area of the United States. 35 of these occurred in 1916. Of these, 26 were in Texas, 4 in Colorado, 2 in Missouri, and 1 each in California, New York, and North Carolina. Most of the typhus deaths have been in newly arrived immigrants.

During the world war there was but little typhus. In the armies of England, France, Italy, the United States, and Germany, although there was a considerable amount in the Russian and Austrian. In 1915 typhus was introduced into Serbia by the Austrian prisoners. During April of that year as many as 9,000 deaths per day were due to this disease. The total number of deaths during the epidemic exceeded 150,000. The epidemic extended into Bulgaria and Rumania. An epidemic in Poland in 1920 gave the opportunity for a most intensive study by a typhus commission under the auspices of the League of Red Cross Societies.

From a clinical point of view, there was at first much confusion about a large group of "pestilential fevers." As clinical knowledge progressed and diseases became more systematically classified, confusion still existed between typhus and typhoid. Pathological investigations developed a heated controversy between the French physicians who described and failed to find the intestinal lesions of typhoid and the English physicians who found only occasional intestinal lesions. The explanation being that the French were seeing typhoid and the English principally typhus. It was not until 1829 that the famous French physician Louis named phoid fever. His pupil Gerhard at Philadelphia in 1838 clearly laid down the differences between the two diseases. Murchison, the English authority of the 19th century, defined typhus as follows:

"A disease attacking persons of all ages, generated by contagion or by over-crowding of human beings, with deficient ventilation, and prevailing in epidemic form, in periods or under circumstances of famine and destitution. Its symptoms are: More or less sudden invasions, marked by rigors or chilliness; frequent, compressible pulse; tongue furred and ultimately dry and brown; bowels, in most cases constipated; skin warm and dry; a rubeoloid rash appearing between the fourth and seventh day, the spots never appearing in successive crops, at first slightly elevated, and disappearing under pressure, but, after the

second day, persistent, and often becoming converted into true petechiae; great and early prostration, heavy flushed countenance; injected conjunctivae; watchfulness and obtuseness of the mental faculties, followed at the end of the first week by delirium, which is sometimes acute noisy, but often low and wandering; tendency to stupor and coma, tremors, subsultus, and involuntary evacuations, with contracted pupils. Duration of the fever from ten to twentyone days, usually fourteen. In the dead body no specific lesions; but hyperemia of all the internal organs, softening of the heart, hypostatic congestion of the lungs, atrophy of the brain and edema of the pia mater are common."

This description is so accurate and concise that today it needs but one correction. There are characteristic lesions but they are revealed only by microscopic histological study.

A laboratory aid to diagnosis that is generally accepted by authorities is the Weil-Felix reaction. This test is the agglutination of B proteus X by the serum from patients. No one considers the proteus organism as being an etiology factor. This reaction is recognized as a non specific agglutination.

Microscopic examination of the blood reveals no characteristic changes.

The infectious agent is rather definitely accepted as Rickettsia prowaziki. The Rickettsia represent a new group of microorganisms. They are small, bacteria-like bodies but are probably protozoa. They occur in pairs measuring one long and in clusters within the intestinal cells of the louse in typhus and the tick in Rocky Mountain spotted fever. In trench fever, they occur outside the intestinal cells of the louse. They do not grow on culture media but have been cultivated in tissue. Difficult to stain, they show up best by the Giemsa method. They are frail and are easily killed. They show great specificity for their insect hosts.

There has been more than the usual amount of controversy about modes of infection of typhus. In the early days, theories ranged from bad air to the curse of the Devil. Protestants regarded typhus as the diabolical machinations of the Papists while the Catholics regarded it as the scourge of God. In Ireland, the cause was attributed to potatoes. The louse was suspected of being the vector as early as the beginning of the 17th century. It was not until 1909, however, that Nicolle, Compte, and Counseil reported that they were able to transmit the disease by means of the body louse (pediculosis vestimenti). They also demonstrated that the disease could be transmitted to susceptible animals by the injection of blood from infected persons or animals. Their findings have been confirmed by numerous workers. Anderson and Goldberger in 1912 reported that they had been able to transmit the disease by means of the head louse (pediculosis capitis). The work of the Red Cross Typhus Commission tended to show that P. vestimenti was a genuine intermediate host for typhus. There seems to be adequate proof that the disease cannot be transmitted by droplet infection or by body discharges nor by bedbugs, fleas, flies or mosquitoes. In fact the case against the louse seemed to have been proved rather conclusively until patients with a condition indestinguishable from typhus were noted where the louse could not be considered a vector. The real beginning of this line of cleavage dates back to the work of Brill and of Anderson and Goldberger. At the time their first reports were published and for several years afterwards, the louse was still considered the unchallenged vector.

In 1910, Brill presented a clinical study of 221 cases under the title "An

of Un-Acute Infectious Disease known Origin." In this paper Brill states "I hesitate to submit the following theme which is based on an experience of 221 cases of an acute infectious disease which has probably for a long time, been considered by others as typhoid fever, but which I hope to show by definite clinical symptoms can have no relation to typhoid fever per se, but that it has a distinct clinical entity entirely separate from typhoid, from typhus, or from any other disease known to me." Brill proceeded to show by blood, fecal, and urine cultures and by agglutination tests that these patients did not have typhoid. After discussing some of the epidemiological and clinical differences from typhus, states: "Clinically, this disease sembles typhus fever more than it does any other disease, and I should have felt that I had offered nothing to our noselogy if it had been proved that typhus fever had lost its virulence, that it was constantly present in the community, that it was not communicable, that when it was present epidemics of it did not occur, and that it was no longer a grave and fatal disease. But with typhus fever, as the great masters of medicine have taught, and as I have seen it, such a conception would be unjustified: therefore, I believe this disease not to be typhus fever."

Anderson and Goldberger after injecting susceptible animals with blood from patients suffering with Brill's disease were unable to infect them with Mexican typhus. This immunity they regard as sufficient proof and therefore stated in their report of 1912 that Brill's disease was identical with Mexican typhus. Brill's disease then began to be known as endemic typhus.

In a paper in 1919, Brill suggested that endemic typhus might possibly be transmitted by some vector other than the louse. However, the work of the Red Cross Typhus Commission, as published in their report of 1922, seemed to prove so conclusively that the body louse was a genuine intermediate host that Brill's suggestion seems to have been forgotten.

The body louse is so highly domesticated that its temperature humidity requirements as well those of its food and feeding times fall within narrow limits. It thrives best at a temperature between 92° and 95° F., and even occasional exposure to 60° F. causes a marked falling off in egg production. Therefore, the person who removes his underclothing daily discourages louse production. Temperatures in excess 95° F. are injurious, especially when there is a humidity in excess of 60%. Consequently the lice are inclined to migrate when the host's temperature begins to climb. When the air temperature is high enough to cause people to perspire, the increased humidity in the small space between clothing and skin soon makes life impossible for the lice. Numerous authors report automatic delousing of infested people traveling from a cold dry climate to a warm humid one. For this reason body lice are cold weather infestations. The body louse does not wander over the body but attaches itself to the clothing, preferably to a seam. It prefers coarse fabrics silk will not inhibit it. When the clothing is not suitable it may attach itself to a hair. Once attached, it holds on tenaciously by at least one leg even when feeding. Complete removal of the clothing frequently removes all lice. The body louse prefers two meals a day, although the adult can go several days without food. Newly hatched lice, however, have food within thirty-six hours. Under favorable conditions, the female deposits eggs or nits at the rate of about five a day. These are generally deposited in nests of fifty or more and are attached to coarse fiber or hair.

One mating will insure fertility of the eggs for twenty days. When conditions are favorable, the eggs hatch in about six days. The young begin to feed immediately and develop into adults by undergoing three moults in about eight or nine days. The average length of life is from thirty-five to forty days, although occasionally individuals will live for two or three months. The body louse has been closely identified with every epidemic of typhus of which there is adequate record.

A North Carolina physician, Dr. William Allen of Charlotte, was one of the first southern physicians to report cases of endemic typhus where the louse could not be considered a vector. Dr. Kenneth Maxcy of the U. S. Public Health Service has made intensive investigations of this condition throughout the southern states. In his papers of 1923, 1926, 1927, 1928 and 1929, he has done much to add to the knowledge of this disease. Because of its characteristics body louse cannot be accredited the vector in the south. In most of the cases reported in the south it has been noted that there was an absence of the louse, both the body and types.

A comparison of the epidemiological characteristics of epidemic and endemic typhus is interesting.

Epidemic Endemic Cold weather Warm weather All ages Middle aged adults Poverty Affluence Filth Cleanliness Crowded Uncrowded Severe Mild Fatality---Fatality-nil 12 to 20% Not lousy Lousy Not contagious

Highly contagious

Clinically the two conditions are indistinguishable except that the endemic type is milder. Both give positive agglutinations with B. proteus

X. Infection with one gives protection against the other. Histologically, the lesions are similar. There is abundant evidence that epidemic typhus is louse-born and that endemic typhus is not. There seems to be adequate evidence that endemic typhus cannot be conveyed by lice. The question naturally arises can these two conditions which differ so much epidemiologically and are so similar clinically, seriologically, histologically, and immuniologically be one and the same disease. The final answer cannot be rendered at the present time.

There is one explanation which would meet all the known facts, yet this is based on theory and so remains until it is proved. This explanation is that endemic typhus may bear the same relation to epidemic typhus that cow pox does to smallpox. It may be a disease of some lower animal and secondarily and accidently of man. Anderson, in 1912, suggested that the virus of Brills disease was an attenuated typhus virus and might some day be used as a vaccine to combat epidemics.

Endemic typhus apparently is a small public health hazard. The patients undoubtedly feel different about this for they are miserable and wretched during the course of the disease. However, its non-communicability has been noted by every investigator. Even when occurring among the lousy it does not spread. Its mortality is nil. In the south our climate may hazard us to malaria and dengue but it protects us from typhus in its epidemic form.

It cannot be denied that we have occasional cases of Brills disease. This fact gives every physician an opportunity to see a patient and the privilege to contribute to medical knowlede if he is fortunate enough to determine the mode of transfer of infectious material. The discovery of this fact might do much to unlock the remaining secrets of typhus.



This little five year old Columbus county colored child is ready for school this fall. She is reported as a "1930 model" preschool child. That is, she is physically perfect. The health officer will see that she is immunized against smallpox, diphtheria and typhoid fever before school starts.



This is a small one room Negro schoolhouse in a southeastern county. Only 15 children are enrolled but the parents of all of them own their own farms. And the nurse reports a healthy bunch.

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NO. 5



A CREED

By

James J. Davis, United States Secretary of Labor

We believe in the child, repository of the future of the Nation and the human race. We believe that every child has a God-given heritage of life, health, happiness, and opportunity to fill its chosen place in the world. We believe in the right of every child to an education of head and heart and hand. We believe that man owes no higher duty to God and society than the duty of service to childhood.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Catarrh Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies

Fly Placards German Measles Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pellagra Public Health Laws Prenatal Care

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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Our Babies" Prenatal Letters (series of nine monthly letters) monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers Who
Want Better Babies
Table of Heights and Weights

Prenatal Care (by Mrs. Max West)

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).

Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months. 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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COMING IN THE JUNE ISSUE OF THE BULLETIN

We feel sure that it will be of considerable interest to our readers to know that we are promised another article by Miss Pyatt for the June issue of the Bulletin on the general subject of cooking for young children. This article by Miss Pyatt will follow her story in this issue about feeding young children from two to six.

In the June issue we will have an article on the subject of milk supply ratings for the cities and towns of the State which have had m'lk surveys made. This article will have a good deal of information about milk which should be helpful to the readers of the Bulletin. There is no more im-

portant public health problem that of a safe milk supply for the infants and children especially of the State. This material is being supplied by the officials in the Bureau of Sanitary Engineering of the State Board of Health. The agitation being carried on throughout the State this year about the necessity for the production of more home supplies has served to accentuate the fact that the milk production in this State is considerably below what it ought to be. We hope that before the end of the year the average production and consumption of thoroughly safe and pure milk will be increased throughout the State.

FIRST FEW YEARS OF LIFE IS BEST TIME TO PREVENT TUBERCULOSIS

There is no better time than now, and no better place than the Baby Issue of the Health Bulletin, for us to discuss the important question of preventing the contraction of tuberculosis in childhood. It is a fairly well established fact that a large per cent of the cases of tuberculosis which develop in the earlier years of adult life especially is the result of infection incurred during the first few months, or at least the earlier years of life. This fact has been more or less thoroughly established by the use of the tuberculin test, which indicates the presence of tuberculosis in school children, and which can be accounted for in no other way except that the infection was contracted while the child was a baby, or in the very earliest years.

We need not go into technical terms in this matter, because the officials of the State Sanatorium for tuberculosis have literature available on the subject, and they also have technical information and advice to offer to any person interested. We may state, however, that there is a type of tuberculosis which has been carefully described and has received the name of the "childhood type of tuberculosis," given to it by the American Sanatorium Association. It is pointed out that this

type is a result of a first infection of the lung tissues with tubercle bacilli. There are other terms, but the aforementioned is more descriptive and is being used in responsible professional circles. It may be mentioned, however, that this type usually occurs in children, but very rarely in adults. It is sometimes localized in only a single part of the lung. The adult type of tuberculosis is often a result of a reinfection.

If active tuberculosis occurs in children, and if the infection becomes diffused and widespread, recovery hard to effect. Our chief interest, of course, is in calling attention to the importance of preventing any baby or young child from coming in intimate daily contact with a patient, especially a careless patient, who is in the active stages of tuberculosis, and in which there are bacilli being excreted in the sputum daily. An infant young child can catch tuberculosis almost as easily as they can catch measles or diphtheria. Babies and very young children should never be allowed to crawl about on the floor or around the room of a patient who has tuberculosis. It ought not to be necessary to say that babies and young children should never be kissed on the mouths by any grown up person, whether sick or well.

One of the serious things about a child contracting tuberculosis in infancy is that tuberculosis so frequently does not make its appearance in the form of active symptoms in anything like as short time as is the case with adults after being exposed repeatedly to the disease. There is another serious consideration in young children, and that is the fact that bones or other parts of the body may be attacked by the disease, in which case few or none of the more familiar symptoms of tuberculosis are recognized until it is often too late.

The North Carolina State Sanatorium has the records of thousands upon

thousands of children in which they have made the tuberculin test, and they would be prepared to supply anybody with definite figures as to what percentage of the children have reacted positively to the test. It is frequently the case that a positive tuberculin test will be present in a child in which both parents are apparently healthy, and often in which there is no history of tuberculosis. Such a child may be underweight, although that is not the case in every instance. The child may have an irregular appetite. It will generally be found that such a child is irritable and nervous and fretful, sometimes complains of headache in school and at home, has a habit of eating between meals, and generally partakes of too much carbohydrate food, is frequently addicted to the candy habit, and generally does not sleep a sufficient number of hours, and the sleep is fretful.

In preventing the contraction of tuberculosis in very young children parents cannot be too careful. There should be no morbid fear of any individual having the disease in the house, but the baby should not be allowed to play around the room, crawling on the floor, where such a patient is bedridden especially. In other words, keep the babies and young children away from close contact with tuberculos's patients of any age.

The work and play of children should be so regulated that they have plenty of time for quiet rest, their food habits should be carefully established on a correct basis at the earliest possible age. The kind of food they ought to have should be carefully prepared and put before them, and they should be required to eat it at regular intervals, and there should be no between meal eating. When the days are long, babies and young children should be required to spend at least an hour or two or more, depending upon the age, in quiet sleep in the day time. Every baby

young child should certainly have at least twelve hours or more uninterrupted sleep every night. The room should be so arranged that the light does not fall on the baby's face. Ventilation should be arranged to make sure of the child's warmth and comfort when the weather is cold, and to aid in keeping it cool when the weather is extremely hot.

At present tons of literature are available to anybody who cares to study the question of nutrition and balanced diet. It is sufficient for us to say here that milk, fresh, clean, safe, whole sweet milk, in abundance should be given to every baby and young child in sufficient quantity every day of its life. Milk together with fruits and fresh vegetables and some cereals should form the basis of the babies' and young children's diet.

From the day of birth the family doctor should be consulted at frequent intervals. There should be a careful all over physical examination by a competent doctor made at least four times a year until the baby is well out of infancy. Then twice a year until the child starts to school would be sufficient. Visits to a good dentist should be started on the appearance of the very first baby teeth. These vis-

its should be repeated just as often as in the opinion of the family dentist a visit is necessary. Prevention at this point is a most important matter.

The family physician is equipped and fully competent to apply the tuberculin test to babies and young children. All that such a physician needs in the way of experience is to see the reaction that occurs in a few children when given by a specialist, and in which some of the reactions are positive and some negative. This is a matter that the physicians are prepared to discuss with the parent. When a child is found to have a positive reaction, the family physician would advise that the child be taken to a competent specialist for x-ray examinations and other important tests.

The death rate from tuberculosis has declined within the last twenty-five years from its position at the top of the list until now there are at least five other diseases that cause more deaths than tuberculosis. But it still causes an immense loss of life in our State, and in our opinion the time to do most about it is to begin at the beginning and prevent the occurrence of the infection in babies and children.

THE YOUNG MOTHERS' CLUB LEARNS ABOUT FEEDING THE CHILD FROM TWO TO SIX

By SUDIE E. PYATT

"Mother, Junior is two years old this summer. I know he is just entering the critical time from two to six when it is so important that he learn the proper habits of eating."

Eloise Batchelor removed her gloves and hat as she spoke, and sat down on the divan beside her mother.

"Yes, dear, I have been thinking about Junior, and I am planning to

give you some tested menus for his meals through the summer months," Mrs. Ross said, adjusting a pillow on the divan to make it more comfortable for her young daughter, who was the mother of a two-year-old baby boy.

"That will be fine, Mother, but," Eloise's smooth forehead became wrinkled. She was thinking. "I am to be in charge of the program for the next meeting of our Young Mother's club. There are ten of us, Mother, all young married women with one or two babies between two and six years. They are all worried, just as I am, over what they ought to feed their babies during the warm days just ahead. Tell you what, Mother, suppose you come to our next meeting, and talk to the girls about the proper menus and d'ets for their children."

Mrs. Julian Ross, who had written several books on the feeding and care of children, smiled at her eager daughter, "Want to exploit your famous mother?"

"O. no, Mother," Eloise was quick to remonstrate, for she knew her mother never made any effort to place herself in the limelight because of the excellent books on child care and feeding that she had written, "I was just thinking of how much you could help the mothers who are needing just the advice you can give them."

"Certainly, dear, I will be glad to talk to your club, but I am going to ask you to have your next meeting here in my house, because if I present my message to the mothers as I wish I will want to do it here in my own home where everything I will need is convenient."

"Why you dear, mother, I did not expect you to invite us here to your home. I was expecting to have you come to my home."

"You must come here, and all of the mothers must bring their babies, simply dressed for a party," Mrs. Ross instructed while Eloise hugged her mother and promised that her conditions would be filled.

"Next Wednesday afternoon at 5 o'clock. here in my home, all of you with your babies, Eloise," Mrs. Ross reminded as her daughter left to go to her own home and telephone the ten members of the Young Mothers' Club, of Crafton, as to the plans for

the next meeting of the mothers and their sons and daughters.

The afternoon for the regular weekly meeting of the Young Mothers'
Club of Crafton, was one of those
lovely spring days that come during
the early part of May. Spring flowers
were blooming in the garden of the
Ross home where the mothers with
their babies were meeting that afternoon. The windows of the living room
and dining room were open and soft
spring breezes floated gently through
the rooms.

At low tables places were laid for twenty-two guests, the number of the mothers and children of the Young Mothers' Club. The low chairs were adjusted by the addition of pillows and books in such a way that no child found it a strain to reach the table for his food.

Eloise, one of the hostesses, was helping her mother welcome and seat their older and younger guests, while her two-year-old Junior, played quite contentedly with the daughter of Mrs. Ernest Swarts, Marian, aged three.

As Mrs. Ross and Eloise, assisted by Eloise's younger sister, Dorothy, served the Egg-in-the-nest on toast, ribbon sandwiches, and milk flavored with cocoa, that made up the principal part of the party menu, Mrs. Ross talked informally to the mothers, who were watching to see that their young folks behaved themselves in a party manner.

"For parties for children, girls," Mrs. Ross said, "you want to remember to serve easily digested foods, and serve them around 5 o'clock, letting the party meal take the place of the regular supper. You must watch new foods. Be careful not to let a child be introduced to a new food at a party."

"Yes, I am always afraid of parties, because of the new foods Marian almost always eats," Mrs. Ernest Swarts said, as she fed her three-yearold daughter, a small portion of the Egg-in-the-nest on toast, without any fears of bad after results.

"It is a good idea to remember, too, young ladies, that too much excitement and fatigue is not good for young children at parties. Don't allow them to engage in boisterous games that are too much for their slender strength, or become fussed and overheated."

By now the children and their mothers had eaten heartily of the simple food served for the first course at the party, and they were given orange ice that was the color of ripe, yellow oranges and thin little Nabisco wafers.

"I see now," Mrs. Kenneth Hill said to Mrs. Henry Casteel, "what Mrs. Ross means by simple, easily digested food for parties for children. This food is all good, and in larger servings substantial enough for grown-ups, but there is no food here that would hurt even an invalid, who was not on a special diet."

"I had been worrying about the menu for a party for Richard's third birthday next month, but I am not going to worry any more. I am going to get this menu, vary it a bit and serve it to the children, knowing that no bad effects will result."

"Girls, now that you and the children have finished with the refreshments Dorothy, with one of her young girl friends to help her, is going to take your children out into the sun parlor where they will entertain them with music, games and stories for the next hour, while you, their mothers, make yourselves comfortable here in the living room, and we will have a nice, informal chat together about feeding the dear, little folks."

Dorothy's and Lillian's smiles, and the sound of music and sight of interesting looking toys waiting for them in the sun parlor, made the separation of the babies from their mothers quite easy, and soon happy little voices sounded from the sun parlor. "Girls, I know you all want to find out as much as you can about how you can best handle your problems of the care of your children. Now that the little folks are having a good time you mothers can forget them while we talk of the things that will help you keep the youngsters happy and well and make them grow as they should."

"I'd like something on the fundamental principles of child feeding," Mrs. Henry Casteel, said as Mrs. Ross stopped talking.

"All right," Mrs. Ross answered Mrs. Casteel's request. "There are five fundamental principles of child feeding. They are regularity of meals, good eating habits, carefully balanced menus, well cooked food, and the right amount of food. As to regularity of meals there are several schedules the mother may follow. I have several here."

The ten mothers began a hasty opening of bags for pencils and bits of paper, but Mrs. Ross had anticipated



The picture of this Wake County baby was made one month after an attack of diphtheria. Up to that time the parents did not know she could have been protected by toxin-antitoxin. Fortunately prompt and competent treatment saved her life.

this very thing, and she now passed out typewriten sheets on which were typed four different schedules for the ordering of the day for healthy young folks.

Eagerly Mrs. Casteel read her schedules: "Number 1, A. M—6:30, Water and fruit juice; 7:30, Breakfast; 11:30, Dinner; P.M.—Nap; 2:30 Milk and crackers; 5:00, Supper; 6:00, Bed. Number 2, A. M.—6:30-7:00, Cup of water; 7:30, Breakfast; 10:30, Lunch; 11:30, Nap; P. M.—1:30, Dinner; 5:30, Supper; 6:30, Bed."

"You see, young ladies, that these schedules give the children approximately a twelve-hour day, with a nap of one and one-half to two hours during the day. The other two schedules, which Mrs. Casteel did not read are practically the same as the two she read, only following those schedules the child rises from 7:00 to 7:30 and goes to bed at 7:00 instead of rising at 6:00 or 6:30, and going to bed at 6, as in the first two schedules. Sunshine, fresh air, rest, and exercise must all be mentioned in the fundamental principles of child feeding, for it is upon these as well as on food, that the body cells depend for their development."

"What is the best method of adjusting diets, Mrs. Ross?" Mrs. Ernest Swarts asked.

"Add new foods in small quantities and never more than one new food a day. A good diet for a two-year-old begins with two ounces of orange juice or strained, canned tomato juice at 7:00 o'clock, cereal, preferably a cooked cereal at 7:30, dry bread, one or two slices, one-half teaspoonful of butter, and one cup of milk. At 11:00 o'clock give a glass of milk, and one or two unsweetened crackers.

"The main meal at 2:00 o'clock may consist of egg or meat, vegetables and a simple dessert. For the meat one may give minced chicken, lamb, or scraped beef, one to three tablespoonsful, of whichever meat is given. One to three tablespoons of starchy vegetables, potato, rice or hominy may be given, and one to three tablespoons of some green stewed vegetables such as spinach, peas, string beans, celery, lettuce, carrots, asparagus, swiss chard. Dessert may be junket, custard, blanc mange, rice, or tapioca, about one-third to one-half cup of either.

"For the evening meal at 5:30, or whatever hour the schedule you select calls for it, give one-quarter to one-third cup of cereal, one cup of milk, one small slice of hard bread or dry toast, a small serving of butter, and one to three tablespoons of some cooked fruit as prunes, dried peaches or apples with the skins removed."

"Mother, my difficulty is in balancing diets for Junior," Mrs. Batchelor asked the next question, as her mother completed the menu for the twoyear-old.

"A well-balanced diet means a wellbalanced child," Mrs. Ross answered her daughter, while the other nine members of the Young Mothers' club listened. In balancing diets climatic conditions have to be taken into consideration as well as foods, and the child's general health condition. winter give hot milk. In the summer the child needs less of hot cereals, but more vegetables, particularly green, leafy ones. Dried fruits may be used, but the menu should be varied with fresh fruit. Fresh fruits are essential during all seasons of the year, but an excess may be harmful. Eggs may be fed five to seven times a week, but be sure they are fresh when served. Serve meat two to three times a week, and fish once a week. Jelly or marmalade, may be served with bread, and so served acts for a simple but nourishing dessert.

"Every child should have one and one-half pints to one quart of milk every day. Milk may be served as a drink, cooked as a food. Raw fruit and vegetables are a part of the daily menu of every well-balanced diet. They may be served canned or stewed when the fresh article is not available, but in balancing the menu the mother must see that some raw fruit or vegetable is included once a day, if possible."

Mrs. Paul Helms, who had a small daughter, Mildred, two and one-half, and a son, Elmer, five, held up her hand as a signal that she had a problem. "Teaching my boy and girl to eat what they should has always been my biggest problem," she said, and all of the other mothers looked at her with sympathetic understanding.

"Children have to learn to eat new foods," Mrs. Ross began. "He should be taught to look forward to his meals and to welcome a new food. Serving the food in atractive, comfortable surroundings will help. Follow balanced menus, and allow the child to have no food between meals. Don't talk of your own, or other people's food dislikes before the child. Cook all vegetables to preserve the taste, and be firmly persistent in teaching the child to eat what he should.

"In teaching the child to eat what he should use indirect methods when direct ones fail. In working the indirect method, stop, serving the disliked food or foods for awhile, or serve the food in small quantities. Serve foods that are liked only after the disliked food has been eaten. Leave the disliked food before the child while you and its father eat. When you are through take the food away without offering any of it to the child."

"That's all very good," Mrs. Helms agreed, "but what about milk? Mildred has fought milk every since the first drop was given her."

"If Mildred doesn't like milk try serving it to her in a small pitcher, allowing her to pour her own milk. Praise her when she drinks the larger portion of the milk, and when she drinks all of it, make her feel that she is a little princess, a Milk Princess, perhaps."

"Do you think it is a good idea to praise children when they eat their food without being forced to?"

"I most assuredly do," Mrs. Ross quickly answered.

"It seems to me that the milk and fresh fruits and vegetables you have been suggesting we feed our children regularly, would cost a great deal of money, Mrs. Ross," said Mrs. Ernest Swarts, whose husband was a shoe store clerk. "What would you suggest for the mother who must economize. Marian is just three and, of course, I want her to have the best of everything, but Ernest's salary is not large, and he has his mother and an invalid sister as well as a wife and a baby to support on his salary."

"Food is the last thing on which a family should economize, Hermoine," Mrs. Ross replied. "But if one must



The father of this two and one-half year old baby is a Snow Hill physician and a college mate of the Editor of the Bulletin. The baby has already been initiated into the mysteries of the D. A. R., as her mother is an official of that organization. But in her sun-suit on the lawn of their home she is not bothering about meetings of the "Daughters" or the Medical Society either.

economize there is a minimum standard below which it is not safe to go in feeding young children. They should have at least one pint of whole milk a day, two vegetables a day, potatoes and one other, and a green leaf vegetable three or four times a week, when not in season, every day when green vegetables are in season.

"Fresh fruit should be given three or four times a week, every day if possible. Dried fruit may be given on the days when fresh fruit is not given. Dark breads and whole grain cereals every day. Give eggs, dried bean or pea soup, cottage cheese, fish or meat, one of each, every day. Butter is always included in the menu, even a menu for economy. Sweets need not stressed. Cooked cereals be are cheaper than ready prepared and better for the child. Tomato juice may be given instead of orange juice. Cake can be omitted, and sweet sandwiches may be made for the children by using brown sugar, molasses, fruits and jellies. In economizing remember not to stint on milk, vegetables and fruit."

"You stressed milk, Mrs. Ross. Won't you tell us a bit about milk?" Mrs. Casteel asked.

"Milk contains protein, fat and calcium in such proportions that it is called the perfect food," the author of books on child care and feeding, responded to Mrs. Casteel's "Without milk undernourishment may result and seriously affect teeth and bones. A pint and one-half to a quart of milk a day will take care of the child's need for milk. It should be heated on cold mornings. Teach your children not to swallow milk in gulps, but to take it slowly. Use only boiled or pasteurized milk. Milk may be used in combination with desserts soups. Menus for young children can be balanced without milk, but only on the advice of a physician."

"George is bothered a great deal with constipation, Mrs. Ross," Mrs.

Kenneth Hill stated, as Mrs. Ross completed her remarks on milk. "How can a mother feed her child to help rid it of constipation?"

"There are certain foods, which if given children consistently, following a plan will cure constipation," Mrs. Ross answered, Mrs. Hill's question, while the other mothers listened interestedly.

"First, give the little boy or girl bothered with constipation a cup of water before breakfast. meals, and at bed-time. Green vegetables, and leafy vegetables are the natural enemies of constipation. These are celery, cabbage, string spinach and lettuce. Fruits share with green vegetables as aids in ridding one of constipation. Fruits containing vegetable acids, oranges, apples, and white seedless grapes are good, as are the cellulose fruits such as prunes, figs and pears. Fruit and fruit juices are often invaluable in combatting constipation, if given before breakfast and between meals.

"Habits of eating are quite as important as the food that is eaten in curing constipation. Teach your little folks to eat slowly, regularly, and masticate well. What is equally as important as either the food eaten, or the method of eating the food, teach your boy and girl to go to the toilet at the same time every day, and avoid cathartics."

"Does the proper food help the child to develop good teeth?" Mrs. Morton Wright, who was the mother of a young son, Richard, just past two, asked.

"It most assuredly does," Mrs. Ross responded.

"Exercise food is to make the teeth work, building foods contain the necessary calcium and phosphorus, and accessory foods, such as cod liver oil, eggs yolk and butter furnish the necessary vitamine D. Clean, well-fed teeth are an invaluable asset to a healthy digestive system."

"Both of my boys are underweight, Mrs. Ross. What can I do to remedy this condition?" Mrs. Theodore Rudolph's voice was anxious. She had heard that children who were underweight were liable to become the victims of most any disease. She was sincerely anxious to bring both of her sons, Oliver, four and one-half and Harry, two and one-half up to the average normal weight for their ages.

"The underweight child, that is the child who is usually 10 per cent or more underweight for his or her age and height, should have rest, outdoor exercise, fresh air and sunshine as well as food," the author of books on child care and feeding was positive in her statement.

"Use extra milk and cod liver oil. The problem of the underweight child is really more serious than that of the overweight child," Mrs. Ross said.

"Janet is overweight, Mrs. Ross. What would you suggest that I do to reduce her weight?" Mrs. Harold Ziegler asked.

"Follow your balanced menus with properly prepared foods, discourage eating of starchy foods, fats and sugars. Avoid excitement at meal time for your overweight child, as well as for the underweight child, increase outdoor exercise, but don't allow it to tire Janet. Let her have no food between meals. If she continues to gain weight under this regime, consult your doctor."

"Candy is Jimmie's worst eating fault," Mrs. James Fisher spoke for the first time during the discussion of food and food values by the Young Mothers Club, and their hostess.

"The best answer to the candy problem is that the well-fed child has no unsatisfied cravings," the hostess of the Young Mothers' Club answered. "Candy should be avoided. It blunts the proper development of the taste nerves, and lacks the elements needed for growth. It satisfies hunger with-

"Both of my boys are underweight, out providing nourishment, and causes rs. Ross. What can I do to remedy digestive disturbances."

There was a murmur of assent to Mrs. Ross' statements about candy among the ten mothers.

"Now, girls, I feel that I have talked long enough for this meeting. There are some really important things about the cooking of food for children that I would like to tell you, but I feel that you have had enough for this time. I will now turn the meeting over to your president, Mrs. Casteel."

"I am sure that we have all enjoyed Mrs. Ross' talk very much, and that we all thank her for the lovely afternoon she has given us, and for her most interesting and instructive talk. Mrs. Ross says that she has some more important things to tell us about cooking for children. Suppose we ask her to meet with us at our next meeting, next Wednesday afternoon, and continue with a discussion of this very important matter of feeding the child from two to six."

"Certainly, we will be more than



This High Point baby at one year old was taking cod liver oil, eating plenty of vegetables daily and walking all over the place. The family asked the baby doctor to please specialize in keeping her well. Looks like he has succeeded.

glad to have her with us again next week," the members of the Young Mothers' Club all said, as they all rose to welcome back back their happy boys and girls, who had just been allowed to return to their mothers.

"Remember 'Cooking for Children' will be the theme of our meeting next Wednesday and Mrs. Ross will be our speaker," Mrs. Henry Casteel, president of the Young Mothers' Club of Crafton, said as she told Mrs. Paul Helms, her daughter, Mildred and her son, Elmer, goodbye, after the meeting at Mrs. Ross' home, where

the young mothers had learned about feeding the child from two to six.

Author's Note: "Feeding the Child From Two to Six," published by The MacMillan Company, New York City, a most readable, and easily understood volume on the important subject of feeding the young child, is the authority for the statements in this story.

A report of the next meeting of the Young Mothers' Club of Crafton, at which they will learn about cooking for children will appear in the next issue of The Health Bulletin.

SOME PHASES OF DIPHTHERIA AND SCARLET FEVER

By

A. S. Root, M. D.

(Extracts from paper read to a local medical society)

Diphtheria and scarlet fever are diseases in which the pediatrician and general practitioner have a common interest and I thought that it might be worth while to discuss together some phases of these two diseases. First, Diphtheria. We need not dwell upon the usual clinical forms of diphtheria which all of us see, You realize as fully as I the importance of instituting treatment at the earliest possible moment. For the first 24 or 48 hours the toxins generated are free in the blood current, but after this time they attach themselves to the protoplasm of the body cells in increasing amounts and out of proportion to the lapse of time, and in this event no amount of antitoxin will reach them. The results of culturing the throat should not be waited for in any border-line case-except in those children who are subject to bronchial asthma, hay fever, or who have eczema. I would urge the intramuscular injection of diphtheria antitoxin as the routine method of administration — never subcutaneously. It has been shown that the absorption of the antitoxin when given this way is twice as rapid as when given under the skin—and that 24 hours can be saved in time—by giving it deep into the muscles—preferably of the buttocks. For any child at any age 10,000 units intramuscularly, one time, is all that is necessary. Less than half this amount will neutralize all the free toxins in the blood stream—and any other toxins in the body will be fixed to the tissues, and hence not reached.

In very toxic cases, intravenous use of antitoxin should be resorted to, and if this is done care should be observed that the product is clear—not cloudy.

In cases of diphtheria in asthmatics or those who have eczema: The serum should be given very slowly—one drop every ten minutes, three or four times, then if no reaction, the rest of the dose.

Despite the use of toxin-antitoxin,

which each year has become more and more general—the incidence of this disease is still entirely too high. One potent source is the child with nasal diphtheria, who suffers no constitutional reaction because the nasal mucous membrane does not absorb the poisons. He circulates among his playmates in school and at play with no other symptoms than a persistent blood-tinged nasal discharge. I wonder if you and if I are vigilant enough in detecting, isolating and treating these cases?

Laryngeal diphtheria deserves especial consideration. The mortality of this clinical type of case is very high -30 percent in young infants and represents a high percentage of the general mortality from diphtheria. We have had a sufficient number of cases to have some definite ideas about this type, which might be emphasized. During the past two years we have intubated 45 cases in ages from 1 to 10 years. Of the 45 cases 28 required one intubation while twelve required from 2 to as many as 12 in one particular case. Those patients recovering from one intubation left the hospital after 4 days. There were 7 deaths, two from overwhelming toxemia. three from myocarditis, and two from broncho-pneumonia. The mortality of the series was 15.5%. Six of these cases were moribund on admission and lived less than 24 hours from the time of admission. Two children became chronic tube cases. One of these finally recovered under the treatment of Dr. Jackson after having been 6 months in the hospital. The other died. The duration of symptoms before admission averaged 5 days-in most cases less than this. Practically none of these children had received antitoxin until just before they were sent to the hospital. All of them were suffering with severe larvngeal dyspnoea, and most of them with embarrassed circulation. The rapid course of the disease from first symptoms to the point when intubation becomes imperative to prevent asyphyxia (being 1 to 5 days usually) emphasizes the necessity of making an early diagnosis. Children with catarrhal laryngitis have higher temperature and greater constitutional reactions at the onset than in laryngeal diphtheria. They are hoarse and croupy through part of the night, but through the day they breathe freely and the voice is rarely completely lost. In diphtheria the laryngeal breathing is progressive through night and day and real dyspnoea rapidly develops. Usually they can only speak in a whisper, but it must be remembered that if the membrane is below the vocal cords as it sometimes is, the voice is not lost. After the development of dyspnoea the condition is grave and probably will not now be relieved by antitoxin.

I wish to emphasize this: That we have seen no cases showing decided dyspnoea helped by the administration of antitoxin in less than 12 to



The mother of this eight months old Duplin County baby writes that "He has never been sick a minute, and I am sure The Health Bulletin has played a large part in developing his healthy body."

24 hours after its administration. They continue to become progressively worse during this period and require invariably relief by intubation. A difficult differential diagnosis sometimes has to be made between laryngeal diphtheria and the symptoms produced by a foreign body aspirated into a bronchus. In both there is laryngeal stridor, but the history of the case, the asthmatic rales, and localized signs in the chest will usually designate these foreign body cases. Culture from the throat will help decide the case.

In some of the hospitals for contagious diseases, notably the Willard-Parker in New York City where it was first performed, the suction method of removing the membrane is practiced. By this method broncho-pneumonia as a complication has been reduced 33 1-3%, and hence the mortality greatly decreased. About 50% of cases receiving suction treatment ultimately require intubation. Broncho-pneumonia does not seem to complicate cases in this climate as it does further North for we had only 4 of such cases in our series with 3 deaths.

The mortality from diphtheria is 33 1-3% less than it was 10 years ago when toxin antitoxin was introduced as a prophylactic measure. Dr. Wm. Park with whom I recently talked stated that 80% of children in New York City who were rendered immune against diphtheria 10 years ago were still immune as shown by the Schick test. Five weekly doses 1 c. c. will render over 90% of children immune 6 month after the last dose. If 3 doses are given a Schick test should be made after 6 months time, and if this is positive 2 or 3 more doses given. There has been recently some controversy whether or not toxin-antitoxin renders a child more susceptible to serum reactions in case antitoxins of any kind should have to be given subsequently. Dr. Park does not feel that

it does to any perceptible extent. However many are using toxin-antitoxin made from goat serum and this is to be preferred to that made from horse serum. There is a product "toxoid" which is advocated for active immunization. Here the diphtheria toxin is neutralized by a chemical and not antitoxin. It is claimed that immunity is more rapid than with toxin-antitoxin. Such is not the case and more violent local and constitutional reactions are seen from its use. The antidiphtheria clinics conducted by State Board of Health have been productive of great good and now North Carolina has more children of the preschool age immunized than any other State except New York. It is a very grave mistake, however, for health officer or any physician in practice to tell parents that three or even five doses of toxin-antitoxin will prevent diphtheria. If they go away with this feeling-then they may fail to call their physician in case the child has sore throat and again if one of these children supposedly immune should contract the disease-then this one case may militate against the use of toxin-antitoxin in many other children whose parents have heard about

Scarlet fever: Scarlet fever is not the problem with us that diphtheria is. The further South one goes the less virulent is this disease. Yet we do from time to time have under our care toxic cases—and very seriously ill children they are.

There has been much written upon the serum treatment of scarlet fever since the Dicks in 1922 proved that the causative organism was a hemolytic streptococcus which made possible the manufacture of a specific serum. There have been reports from many different parts of the country upon the results of its use and there is a wide variation among the different authors. At best the results are not generally striking—in marked

contrast to diphtheria antitoxin. This is probably because scarlet fever antitoxin is antitoxic but not bactericidal.

A summary of these reports analyzed by Toomey-(Nov. 1928 Journal A. M. A.) indicates that the fever is lowered, the rash fades, the toxemia is relieved a day or two earlier in treated as compared with untreated cases. Complications seem to be lessened in the treated cases, but how much it was difficult to say. In over 50% of cases a violent reaction to the serum occurs which often makes the child sicker than the disease did. Of the 12 or 15 cases we have personally treated with serum roughly 60% have had violent late serum reactions. It is unwise to give serum treatment to any mild case of scarlet fever, or to use it as a prophylactic agent unless there has been a very definite and close contact with the sick child. At the Willard-Parker Hospital the criterion for its administration in any given case is where the fever at the

onset is as high as 102° by mouth. Unless the serum is given early—while the rash is still bright—it is ineffective and should not be used.

We have followed the Willard-Parker Hospital rule and give it to cases which start out obviously sick and with a temperature 102° or over. Active immunization with scarlet fever toxin is not nearly as satisfactory as active immunization with diphtheria toxin-antitoxin. Active immunity in scarlet fever only lasts about 3 years. We would not recommend its use in this climate except in orphan asylums, or where large groups of children live together.

The Dick test shows practically the same age susceptibility in scarlet fever as the Schick test does in diphtheria. The intensity of scarlet fever varies from year to year and is different in different epidemics, consequently it will be some years before the true value of scarlet fever antitoxin will have been determined.

THE PREVENTION OF INFANTILE DIARRHEA

By

CHARLES R. BUGG, B.A., M.D.

Each year at this time the problem of infantile intestinal disturbances assumes increased interest and importance. While these disturbances are not confined to the summer months they reach their peak of frequency and severity at that time. It seems wise for us therefore to be prepared, as far as possible, for this annual occurrence.

Preventive medicine is destined to become an even more important branch of our science than it has in the past. It has now to its credit the near eradication of smallpox, malaria, and yellow fever, and the marked reduction in the incidence of diphtheria, where the methods have been active-

ly utilized. The more careful supervision of milk and water supplies by boards of health and the disseminanation of knowledge of rules of infant care have done much to prevent intestinal disturbances. Much is yet to be accomplished, and most of the preventive measures of the future must be in the hands of the parent.

The first step in studying the prevention of any disease must, of necessity, be the determination of the cause.

For practical purposes infantile diarrhea may be considered to fall into two general groups. The first group is a large one which we will call acute intestinal indigestion. This group includes vomiting and diarrhea produced by a variety of causes. The second group is the disease dysentery, often called "colitis."

Some of the most frequent causes of diarrhea of the indigestion type are (1) Improper food (2) Improper schedule of feeding (3) Contaminated or spoiled food (4) Excessive heat, due either to summer weather or to hot houses or to excessive clothing or covering (5) Infections somewhere in the infant's body which indirectly lower his ability to digest his food.

It seems wise to take these up in order—Improper food means food which is too complicated for the baby's digestive capacity. It is impossible to discuss this whole subject. The diet should be prescribed by the physician. One or two points however are worth stating. No child under four years should have fried or greasy food, sweet potato, corn or nuts.

The schedule of feeding must be prescribed for the individual child. The commonest error is overtaxing the infant's digestive system by irregular or frequent feedings, which provide insufficient stomach and intestinal rest.

It has been long recognized that the hot days bring trouble for babies. This is partly due to the increased virulence of the bacteria that produce some of the intestinal disturbances in hot weather and partly to the direct influence of atmospheric heat on the infant's digestive system. We cannot control hot weather. However, the baby should have the advantage of our knowledge that heat outdoors is less harmful than heat indoors, and that removal of all clothing and frequent sponging of the body with cool water on the extreme days counteracts, to some extent, the effect of the excessive atmospheric heat.

It cannot be doubted that some digestive disturbances in cool weather are produced by the almost universal habit of overheating houses and overdressing babies. Many of the babies in our very mild climate of North Carolina are dressed and covered in a way that would be almost sufficient for an arctic expedition, and the temperature of many of our houses in winter is such that upon entering one experiences a definite sensation of impending suffocation.

Special emphasis should be given to the final one of these causes of indigestion-acute infections outside the digestive system. It is not clearly understood how these infections bring about their effect on digestion, but there has been almost universal acceptance of the fact. So much impressed with it are physicians that the first step in the treatment diarrhea always consists of a complete examination to find or eliminate such an acute focus of infection. It is likely to be acute ear infection, acute throat infection, bronchitis, pneumonia, boils or acute (pus in the urine). Usually this infection is obscure, frequently symptoms are overshadowed by the intestinal symptoms, and very care-



These three beautiful Thomasville children are visiting their grandmother who is eighty years old and who lives at Farmer, N. C. Guess who is enjoying the visit most.

ful search is necessary to find the infection. The treatment of the diarrhea is much handicapped if the infection causing it is not found and treated.

Of the greatest importance is the tremendous preventive value of breast feeding, if this is wisely carried out. It is rare to see a nursing infant develop any type of severe intestinal disturbance, and when he does, recovery is the rule. In this same connection it should most emphatically be stated that some of our most severe and fatal cases of diarrhea are seen in babies where maternal nursing has been continued beyond the normal nursing period, which is 9 or 10 months. The harm of prolonged maternal nursing gives us one of the most interesting chapters in infant psychology habit formation. It is the rule that breast feeding continued to 14 or 15 months is associated with a gradual tendency to refuse other necessary articles of food which means an insufficient and inadequate diet always followed by loss of weight strength and development of anemia. In such an infant the intestinal disturbances find their ideal field for work, and the germ of dysentery its ideal soil for growth.

To eliminate this dangerous habit we must first eliminate that large mass of false superstition on which most of it rests. In some peculiar way past generations have connected weaning with the eruption of teeth, with the signs of the Zodiac, with phases of the moon, etc. Such considerations of course must be completely eliminated from the problem in our enlightened age.

It is a good general rule that intestinal disturbances are more likely to occur in babies who are failing to gain weight normally. The old rule of limiting an infant's diet to prevent intestinal disturbances has been discarded. The whole plan is to have him taking adequate amounts of necessary foods in order to properly

build and develop all his bodily systems. Such an infant has the best form of insurance against diarrheal disease.

The second type of diarrhea is that which is properly called dysentery, often called "colitis." This disease is caused by the presence and growth of the dysentery bacillus in the intestine. This germ is very widespread especially in hot weather, and gains entrance into the body in one of three ways—milk, water or flies.

With the knowledge of the cause the necessary preventive measures are obvious. But obvious does not mean easy. The careful supervision of milk and water supplies has materially reduced the incidence of this disease, especially in the towns and cities. In the rural districts less improvement has been noted, and it is in the rural districts that most of the cases now occur. It is frequent enough in the cities, however, to still constitute a very important problem.

No matter how carefully supervised the milk supply is, all milk should be boiled for babies under 2 years. Three minutes of slow boiling will kill all harmful bacteria, and if the milk is then kept cold no harmful bacteria will grow in it. Vessels and bottles that are used for babies' milk should also be boiled, as should the nipples. The baby should have his bottle held for him to avoid its falling on the floor or otherwise contaminating the nipple.

Where there is the slightest doubt about the purity of the water, this also should be boiled before allowing babies to drink it.

The control of flies is more difficult. Screening of houses has saved many lives and, where possible, should be practiced. If this is impossible at least pantries and kitchens should be screened, and in no case should flies have opportunity to get to excreted material. These insects are responsible for many cases of dysentery, for after alighting on infected material they not only carry the bacteria to food but to other articles which children put in their mouths. The bacteria are frequently present in the intestinal material of a person who has no symptoms of the disease.

Of course many of the cases of dysentery are contracted from other cases. It is quite contagious, especially for other children. This means that any infant who has dysentery should be isolated from other children. His clothing and diapers should be soaked in an antiseptic solution such as bichloride or Lysol and then boiled. Where the child is old enough to use a receptable the same type of antiseptic solution should be poured over the stool before it is desposed of.

Dysentery is characterized by a sudden onset, often with violent symp-

toms of fever, prostration and vomiting. Very soon the diarrhea starts and the diagnosis is made on the type of diarrhea. The stools are strikingly frequent, contain blood and pus, and are usually preceded by cramp-like pain and passed with considerable painful straining. The persistence of blood and pus is the distinguishing point from diarrhea of the indigestion type.

The mortality from dysentery is still alarmingly high in spite of our improved methods of treatment. We have no specific method of prevention or treatment such as a serum and must depend on other methods.

It is to be hoped that the principles outlined here may stimulate an increased determination to put them into practice, for it is on these principles that we must depend in the fight against this enemy of infants.

THE SIGNIFICANCE OF THE DEVELOPING TEETH IN THE HEALTH OF THE DEVELOPING CHILD

By

BAIRD U. BROOKS, M. D.

The coordination and the cooperation of the medical and dental professions in the care of teeth in childhood has not been very great in the past, but as we learn more of the importance of this subject, and the dangers of neglect in this matter, each profession has become more aware of its responsibility, and more alert in remedying a condition which has long existed to the discredit of both professions. I am unable to assign any reason for this neglect in the past except the unwillingness on the part of each profession to inflict pain on these helpless individuals, or else an unworthy desire on our part to shirk a responsibility which requires the greatest patience and tact on the part of any one undertaking such a task.

However, our knowledge has now advanced to the point that we realize the danger of neglect of the temporary teeth, dangers which in many instances are hidden from the casual observer, and we must either prepare ourselves to face this obligation or acknowledge that we are superceded by a younger and more alert member of our profession.

Our apparent neglect of this condition seems more difficult to understand when we recall the significance the eruption of the teeth has an index to the development of the infant. The

mother even realizes this significance. Every mother looks anxiously for the first tooth, and points with just pride to its early eruption, and it is a rare and unusual occurrence when any one makes this important discovery before the proud mother. It is household knowledge handed down for many generations that the early. regular and orderly eruption of the temporary teeth indicates a regular and orderly development of other parts of the body, and therefore a good and healthy baby.

Just as the early and orderly eruption of the temporary teeth indicates an orderly and good development of other members and functions of the body, so also does the slow and disorderly eruption indicate some faulty development elsewhere. So the pride of the mother in this development.

which is either instinct or tradition on her part, is well justified in truth. The good pediatrician, just as the good old fashioned horse trader, can fairly accurately tell the age of his patient by a look at his teeth. There are two at six months, four at eight months, six to eight at ten to twelve months, and any great deviation from this rule leads us out on a search for the reason why. During the second year of life the four molars and the four canines are erupted and at this time the baby is ready to be referred to the dentist.

It is unfortunately true that with the eruption of the stomach and eye teeth the mother feels her anxiety in regard to the teeth has come to an end, and generally she heaves a sigh of relief and from that time onward the teeth of her child receives very



Priscilla Alden is six months old and Nancy Bascom is eighteen months old. They are children of the Craven County health officer. Neither has ever been sick. The principal item of food is lactic acid pasteurized milk. Both were successfully vaccinated against smallpox at six weeks of age. Had their toxination to prevent diphtheria at six months, and Nancy had her vaccination a rainst typhoid at one year of age. If all Parents were as careful to protect their children, North Carolina could soon say farewell to those three dangerous diseases.

little consideration. From this time on for bacteria, having moisture, heat, the lurking dangers of diseased teeth begin to show themselves. food and darkness, all of which ten to promote their growth. Many varied

It has been stated that after the eruption of the first sixteen teeth the child should be referred to the dentist for regular inspection. This serves a twofold purpose. It gets the mother in the habit of frequently inspecting the child's mouth for evidences of trouble. When trouble appears she finds it early and can get it corrected. On the part of the dentist it enables him to discover early evidences of decay and gives him an opportunity to correct it before it has advanced to the point that it becomes a danger to the health of the child. It gives him the opportunity to instruct the mother in the proper precautionary measures for the teeth. In other words it gives him an early opportunity to lay the foundation of one of the most important measures in preventive medicine. The decay and destruction of the temporary teeth produces one of the earliest foot holds for undermining the future health of the child, and hence the importance of discovering these defects early and remedy them as soon as they are discovered.

The normal state in childhood is one of growth and development and anything which retards this normal condition assumes the same relative position in child life that does that thing which limits the earning capacity or usefulness in adult life. Indeed it may be of even greater significance in childhood than in the adult, for whatever retards the child will gather its toll in the adult by limiting the usefulness of that life.

A few words regarding the beginning of these conditions may not be out of place at this time. As soon as the temporary teeth are erupted they are attacked by bacteria and as a result we have to combat conditions varying from green stain to complete loss of the teeth.

The mouth is an excellent incubator

or bacteria, having moisture, heat, food and darkness, all of which tend to promote their growth. Many varieties of organisms are found but the predominating ones are, streptococcus hemolyticus in acute alveolar abscesses and streptococcus viridans in chronic alveolitis. The bacteria do not affect the teeth directly but by decomposing saliva and ingested sugar they are able to overcome the resistance of the enamel and dentin. Decay depends upon the state of acidity of the blood and the number of bacteria present.

The first step in the carious process is the formation of the "bacterial plaque," which is composed of mucin, bacteria and of food debris. plaques may be made to appear on the teeth by painting the surfaces of the teeth with 7% iodine solution. The plaque appears as a small dark spot. Large accretion of mineral salts mixed with mucin and bacterial debris appear near the openings of the salivary ducts and in other places in the mouth. This is known as tartar. Green stain is found at the gum margin and is due to irritation, at this point, of putrefactive bacteria in combination with mucin and the coloring matter of the blood. Pyorrhoea, or gum abscesses, is the result of irritating and neglected deposits of tartar, and by an unhealthy condition produced by poor mouth hygiene.

I would not attempt to say what dental work is necessary to be done in the child's mouth as these defects appear, but I would emphasize the importance of correcting the defects as they appear, and not to pass over them lightly by feeling and saying, 'Oh, they are only the temporary teeth and will soon be lost." They are needed to bring about proper development of the jaw." It is my impression that, while the proper development of the jaw is of the utmost importance, it does not, and cannot ever be justified to sacrifice the health of the child

for the proper development of the jaw.

If we consider some of the physical results of decaying teeth we will easily realize the importance of correcting these defects early. As the decay develops we get all the evidences of a focal infection which are seen in later adult life. The first signs will probably be found in the presence of toothache as some sensitive portion is exposed. Who of us has been spared these agonizing pains of toothache in childhood? The hours of agony and sleeplessness, not to mention the nervous strain, still loom up in our minds as nightmares of the past which we fain would forget, and which we would spare the childhood of our present generation if such a thing be within our power. The direct transmission of these organisms of the mouth, together with the particles of decay, born into the stomach and intestinal tract can but give rise to many digestive disorders too numerous to mention. But the absorption through the blood stream gives rise undoubtedly to greater dangers than those by direct transmission into the intestinal tract. We have then all the far reaching results of a focal infection which gives rise to as many serious conditions as they do in later adult life. Pyelitis, endocarditis, rheumatism follow as a result of abscessed teeth. The end results are more far reaching than could be enumerated in a discussion of the limited time allowed for a paper of this kind. Suffice it to say that decaying or abscessed teeth are, next to infected and diseased tonsils, a greater source of danger, and a greater cause of ill health than any oher condition which confronts the pediatrician.

Next to evidences of infection as mentioned will be found evidences of malnutrition. This may be due in the first place to incomplete mastication, and in the second place to the presence in the intestinal tract of the results of the decaying particles. When the child for any reason becomes deprived of the full power to exercise complete digestive functions then the very foundation of his physical structure has been undermined. The presence of the decaying matter in the stomach and intestinal tract not only impairs the digestive capacity but it lessens the appetite as well, and thus we find a child with little or no desire for food and with a limited capacity to digest even the small amount he takes into the stomach. The result is the child rendered nervous and irritable by sensitive teeth, appetite impaired, digestion impaired, resistance lowered, and all these strong holds of health removed at the same time invading organisms are standing ready to overpower and to lay waste the normal functions of the body. Small wonder it is then that these pitiful creatures become the prey of invading hosts of disease, and in many cases almost hopeless invalids.

Malocclusion is another condition produced by faulty condition of the teeth, most commonly by misplaced eruption of the six year molars. In malocclusion of his type the upper front incisors protrude and the lower lip does not close over the upper front incisors, or meet the upper lip, and



The mother who sends in this beautiful photograph of this Chapel Hill baby taking her duily dose of sunshine says, "I don't go off and play bridge and leave my baby to a maid, and I prepare all her feedings myself." The baby looks it, too.

the child breathes through his mouth, producing a narrow upper arch, carious teeth, and mental retardation.

Purulent conditions of the gums. or alveolar processes are said to produce 20% of all diseases. The intimate relation of pyorrhoea to systemic diseases has been mentioned. The relation of diseased mouths to epidemiology has been brought out by Fones in a report in which he shows a most favorable difference which he attributes to the improvement in the conditions of the mouths of school children after the introduction of school hygienists in the schools of Bridgeport. Fones also studied the relation of retardation to defective teeth and finds it is reduced 50%. He also believes that the dental work done in the Bridgeport schools has raised the mental status 15%.

Wm. R. Woodbury says, "There is no longer the slightest doubt concerning the relation of alveolar abscess and pyorrhoea to chorea."

In determining the presence or absence of alveolar abscess the X-ray is invaluable. Many abscesses dry, leaving caseous foci containing live bacteria about the roots of the teeth. They are in a latent condition and may cause neither pain nor tenderness. Their systemic results may be very serious and their presence should be investigated with the X-ray.

In conclusion I desire to report one case which illustrates more than any patient I have ever had the conditions as brought out in this paper.

William A. was a seven year old son of healthy parents. He had been a normal infant at birth and had developed normally. In his childhood he had had whooping cough, measles, chickenpox, influenza and tonsilitis. His tonsils and adenoids had been removed one year prior to his visit to my office. At the time of this visit the chief complaint was a poor appetite and under weight. There had been

no cough, but had been slight hoarseness.

A physical examination showed a very poorly nourished child who seemed quite sick. Examination of the mouth showed the gums infected and the presence of numerous abscessed and decayed teeth, the glands of the neck were enlarged. He was advised to have the abscessed teeth removed and this advice was followed. Three days after this operation his weight was 39 pounds and 10 ounces. One week following this his weight was 41 pounds and 7 ounces, a gain of one pound and 13 ounces. The following week he showed a gain of 1 pound and 1 ounce, the following week a gain of 1 pound and 8 ounces, the next two weeks he had gained 14 ounces, and the next two weeks a gain of 14 ounces, being a total gain of 6 pounds and 2 ounces in seven weeks time.

In addition to his gain in weight, his change in appearance and his whole attitude toward life was equally striking. He had resumed his school work and was keeping pace with his fellows.



This baby, who lives on a Johnston County farm, is now about two years old. As you can see, she has started in early to enjoy the season's outdoor recreational facilities.

MRS. ARMSTRONG GIVES MRS. YOUNG SOME SENSIBLE SUGGESTIONS ON CHILD CARE

By

JOSEPHINE SHARKEY

"Let me have a bottle of bichloride of mercury tablets, please. That's what you get to put in the water you wash diapers in isn't it, Mrs. Armstrong?" The tired, worried mother asked her neighbor at the drug store counter. "Good gracious, no. Five minutes boiling in plain water will kill all the germs from Germany and the "Mike-robes" from Ireland. What is the trouble." "My baby has a rash and is so uncomfortable. Mrs. Jones said it might be the cereal making him acid and I stopped the cereal but he isn't any better. Then Mrs. Brown said that as he hasn't a rash anywhere else it might be a good idea to wash the diapers in bichloride of mercury water because that is the strongest disinfectant made."

"Perhaps it is but I wouldn't bring those pretty little blue tablets into the same house with your three year old Billy for he might do some investigating. What sort of soap do you use?"

"Good strong soap, the kind I use for the rest of the washing. I have to get them clean and I have such a pile of washing these days."

"Perhaps that's the trouble. A baby's skin is very tender and I never use any soap for Jane's clothes that I wouldn't for my own face. My washing doesn't take me more than ten minutes a day because I have a covered white enamel bucket with soapy water that I drop her little things into then once a day I rub them out, then a good rinse, then out in the sunshine to blow dry. My baby is perfectly well, God bless her, and I don't even boil them on a good sunny day but if there is no sun I give them

a five minute boil. You will be shocked when I tell you that I don't even iron them, just pull them straight when they go on the line and when I take them in they are all fresh and smelling of the outdoors. That's one of the ways I save time."

"Oh I wish you would tell me what makes you look as if you had all the time in the world. You seem years younger since your baby came and so well and happy and everyone says you have a prize baby. Have you a secret or some trick?"

"No it isn't a secret or a trick, not one I wouldn't be glad to share with you. Why don't you come round this afternoon and we'll have a good talk while the babies sleep. That's my package, isn't it? You gave me the pint size cod liver oil, didn't you? Thanks."

That afternoon Mrs. Young pushed her pale, thin baby, wrapped up in ever so many clothes, round to the Armstrong's.

"Let's put the baby round the corner of the house where Jane is in the sun, then our voices won't bother them."

"But I am afraid to let Georgie out of my sight. He kicks off the covers so and he's had so many colds this winter."

"Oh, we'll soon fix that up. One of the first things I got in my baby's outfit was a set of fasteners that really hold the bedclothes where they should be. They are worth their weight in gold for they save me hours of time and so much anxiety. When I tuck Jane in for the night or her nap I know she can't get uncovered so I don't have to keep looking in and

opening and shutting the door and waking her up. She knows that I won't come back till time for her to get up so she settles down to the serious business of the moment and is soon fast asleep. I'll get Jane's set for the other bed. I keep one on that and one on her little out-doors bassinette."

"You're not going to leave them there with the sun shining in their eyes?"

"Yes indeed. It shines on their faces but not directly into their eyes and sunshine is one of the most precious things a baby can have. Do you know that right after Jane has had her seven o'clock bottle in the morning I put her downstairs on the east porch in the morning sun because the sleeping porch doesn't get the sun till later in the day. She really never comes in till time to put her to bed for the night except when I feed and change her and now that spring is coming I even feed her out doors. I keep moving her bassinette round after the sun. The sides are padded so she doesn't get the wind, just the fresh air and sunshine."

"But everyone says it's bad to have the sun on a baby's eyes. I have heard that all my life."

"No the government bulletin says it's all right shining on their closed eyes or from in back of them for their brows protect the eyes."

"What do you mean by the Government Bulletin?"

"Do you mean you haven't one? Why, I couldn't keep house without mine. Here it is look at it all curly round the edges and the pages turned down. It really has all the information anyone needs and has been done by the best specialists the country can boast of. This is the new edition of 'Infant Care' just out and it is right up to the minute. You see they are finding new things out every day. Do you know the bulletin called Child Management? That is also free from the government and it is written by a

doctor who was awarded a prize two years ago for the finest book on child care. That book would give you lots of ideas about your young Jack who is beginning to bother you. It will relieve your mind about some of the things he does which seem so wild to you. And perhaps it will call your attention to little signs of something really needing care."

"Oh I do need something for Jack. Some days he almost runs me crazy. He didn't seem to be so naughty till the new baby came but some days now he seems to be 'possessed.' He has gone back to so many of the things he had been all trained out of and the more I spank him the worse he gets."

"That's it. Read Child Management and you may see a reason. Here Jackie was the baby and had all the attention, perhaps a little too much and now along comes this baby brother and Jack has to take a back seat. He has to 'act up' to get attention.



Two fine members of their grade graduating class in a Thomasville Sunday School.

Maybe he would rather have a spanking than be ignored. Here, I'll lend you my copy to use till you get your own."

"But you haven't told me about yourself and why you look so much younger while most of the rest of us are so tired and nervous."

"Well, there is a story about that," and then Mrs. Armstrong's face became serious. "You know Jim and I wanted this baby from the moment we were married, even before, we talked of her and when I knew that at last we were to have that joy, it came to me in a flash that our baby's inheritance was all settled then and neither of us could do anything about it. It made me feel very serious but then Jim was twenty-five and I was twenty-three and, after all we were young and strong and weren't giving her such a bad heritage after all. Then the thought came that most of the authorities now say that environment is four-fifths of the battle and the first year or two the most important of all. They say that no matter what the inheritance a child may be made or broken by the environment wasn't I to be that baby's environment for these first few years before she went to school? Then I began to take stock of me and the other young mothers I knew who seemed to get tired and nervous. There was plenty of time to think and plan. I tried to find out what was really important.

"If I were to be the baby's 'environment' I must keep myself in the best physical condition so that I could serve at my best this little baby we were bringing into the world. I must keep myself from getting overtired and I looked about me and saw where I could make living a bit easier. One of the first things I did was to have the kitchen sink and the bath room lavatory raised to a height that I could wash things without bending my back. I didn't know how much my back got tired till it stopped. Why,

I believe that one thing has made me feel years younger. Our little home was very sweet and lovely but I knew that a little baby coming in would upset a lot of the schedules and that there would be times when it could not be as tidy as it was without her, still, I believed I could plan a lot of things for her comfort and which would make things easy for me and I have. We'll have to take a whole afternoon on them if you want me to tell you about them.

"Then it seemed to me that most babies were rather foolishly dressed. They were uncomfortable and wash was enormous. My baby was to be an out doors baby so besides the bed on the sleeping porch, I got a cheap bassinette on wheels to keep on the down stairs porch where I could give her a glance once in a while as I was working about. If a baby wears a dress and a petticoat or two they get wet (unless you use rubber pants which are not good for them), then whenever they get wet everything has to be changed and the poor little arms pulled in and out of armholes. Or else the clothes are rolled up and get in a hard wad. I saw where I could make baby happy and save lots of washing, and keep my good humor by having her wear shirt, diaper and sweater. You see, the clothes fasteners keep the clothes well up across her chest and still she can sleep with her arms overhead. In verv weather she had mittens and socks and when she was really tiny I kept a hot water bottle always at her feet and put in fresh water each time I took her in for a feeding. You know how good it feels to have your feet warm and perhaps that was one the reasons why she did not have colic.

"I got a light weight wool bat, full bed size and made two thin and one double weight quilts to fit her bed. They are washable and very light and warm and with the three the warmth can be adjusted to almost any temperature. I got enough bottles so that all her feedings can be prepared at once and, as they are the kind that boiling water won't crack I still have the same number I started with. She has her own double boiler never used for any other cooking but hers so I know I will always find it clean when I need it. I do enough cereal or sieved vegetables for two days and put them away in the ice box in little screw top glass jars and they can be heated in the jars when needed."

"But is it true that your baby never had a cold all winter. How did you manage it?"

"Yes. She hasn't even had a sniffle, bless her! Some of it must be luck but I have been very careful. She has never been in an overheated room and I keep her feeding schedule right to the minute no matter what happens and I am so particular about washing my hands carefully whenever I handle anything to do with her food. I boil the bottles and nipples strainers and funnel and everything before using them a second time and even lift them out of the boiling water with a tongs and put them on a clean towel to drain and then put them away in a clean covered kettle till I need them again.

"You see, little babies pick up germs so easily and I want to save her from all the things that can be prevented. My Irish Grandmother used to say, 'The first rearin' is the best rearin,' and I want Jane to have such a good start that when they have the summer roundup the year before she goes to school she will be one of those 100% children. A child needs to be 100% for that first year of school for besides the strain she will be exposed to all sorts of epidemics. If I can make her strong enough she will stand a better chance on the measles, whooping cough, chicken-pox and the rest of them. Of course she will be inoculated against smallpox, diphtheria and all the preventable ones. Isn't it wonderful that we can prevent so much these days? In our grandmother's time a woman had to have twelve children to bring up three or four, but now with the doctors learning new ways of prevention every day and the state trying to help in every possible way to save the babies and mothers we all have a better chance. Oh look at the time. I have talked a lot."

"But you have told me so much. I was sort of down in a hollow with everything in a muddle all round me but you've taken me up on a hill with you where I can look out and forward for my babies. I'm going to start right now working for that 100% in the summer roundup for my two and perhaps you'll let me come again and tell me some of the little things you did in your housekeeping and with your baby's things that make life so easy for you."

"Yes, indeed. Come soon and don't forget the Government Bulletins. Get one called 'Sunlight for Babies' and then maybe you'll have Georgie out in the sun at half past seven in the morning like Jane."

JEAN'S DREAM

By

NELL CULLER

With a long drawn sigh Jean's mother turned away from the bed where Jean lay asleep. Asleep, yes, but what a struggle it had been! Be-

cause sleep had come to Jean only after much fretting and scolding on the part of her mother, and still more fretting and much rebellion on Jean's

part. And sad to say the same thing was happening each night with increased trouble at every occurrence.

Jean's mother, with a troubled expression in her eyes, took one last fond look at the tousled head and left the room. Had she known what was to go on in that little head during the night she would have had a smile of satisfaction on her lips instead of the troubled expression in her eyes.

As the hours of the night slipped by Jean's breathing became regular, her slumber deeper, and the good fairy of sleep said she smiled as if she were very happy. But again she frowned and became very restless, then the happy smile followed. What was happening to Jean Why, she was having a dream, of course, and such a marvelous dream!

Jean is in a big wood. Through the tall trees the sunlight is flickering: beautiful flowers grow along the banks of a small creek. What a time she does have, romping and playing to her heart's content, but she soon tires for she has not been sleeping well. Pangs of hunger have made her conscious of the fact that she is very hungry-hungrier than she ever remembers being before, and she immediately wishes for candy and You see she has been accustomed to eating such things when she wanted them so we might venture a guess as to why she slept badly.

Finally the pangs of hunger became so great that she could no longer enjoy her play, so she started up a woodland path in search of someone to give her something to eat. Little Jean trudged along—almost in tears now—until she came to a clearing and through the tears that had gathered she saw the queerest house. She drew nearer not able to believe her eyes. Why the fence posts were asparagus and the palings were macaroni! Could she believe it? But the house was the queerest of all—the porch posts were made of milk bottles,

and the house itself of oatmeal stucco with a thatched roof of spinach and a squat little tomato chimney. In the yard grew fruit trees of many kinds and they were all hanging with ripe fruit.

Jean was startled from her wonderment by the opening of the front door which, by the way, was made of carrot panels. The loveliest lady Jean had ever seen appeared.

"Who are you?" Jean asked. The lady laughed. "Can you not guess? I am the fairy of Proper Food."

"Oh," said Jean, "I am so hungry can you not give me something to eat?"

"With pleasure, my child" the good fairy replied. "You look as if you need my care."

She held the door open for Jean, and they passed into a large airy room where Jean was told to sit down at a table.

"I would like some coffee and cake



Books have been written which expressed much less than the photographer tells in this picture of these two fine Rocky Mount children.

if you have it good fairy," said Jean.

"I am sorry, Jean, but in this house we do not know what coffee is, but here is something that I think you will like better," she said as she placed a steaming bowl of cream soup before Jean.

Jean frowned. "My mother doesn't make me eat soup when I don't want it, and I do not want this now."

"My dear child, if you will eat what I give you I will show you something very interesting when you have finished."

Jean drank the soup all the while speculating on the surprise. The soup was followed by spinach, a baked Irish potato, bread, butter and milk. This called forth many protests from Jean. She wanted meats and pastries, but she finally gave in and ate what was given her, because she was really hungry. Her dessert was stewed apples and a cookie.

"My mother gives me pie," she pouted.

Finally the lunch was eaten and Jean was eager for the surprise. The fairy led her to a door and opened it. Within were several children seated at a table eating their lunch.

"Why," said Jean in wonderment, "they look just like me."

"Yes," said the fairy, "they look like you, and what kind of food are they eating?"

"Why, the food that I have at home."

"Exactly," said the fairy. "Now come with me to another room."

In this room was another group of children eating lunch.

"Oh," said Jean, "they look like me too, but they look so pretty and happy."

"I know," answered the fairy, "and the reason they look that way, little Jean, is because they have been eating the right kinds of food for a very long time—the kind you had for your lunch. You could look like this too if you would do as they are doing."

When the fairy had finished speaking Jean woke to find her mother bending over her.

"Oh, mother," she cried, "I've had the loveliest dream!"

"Tell mother."

So Jean told her dream from beginning to end.

"And, mother," she ended, "I want to be just like those pretty children."

"So you shall, dear. We shall start this very morning at breakfast to make you that way."

DICKY BOY'S VISIT TO THE COUNTRY

By

LORINE DAVIS

Dick was six years old and lived in the city, but he was such a thin, pale little boy that everybody thought that he was only four. And his mother and father were very much afraid that he would not be large enough to start to school in the fall.

Can you guess what was the matter with Dick? First, he did not like spinach or any other vegetables except pickled beets, Irish potatoes and candied sweet potatoes with marshmallows. When the last was one of the dishes served for dinner that was all that Dick would eat, all except, of course, his dessert, because he was very fond of desserts. Worst of all this little boy did not like milk! His mother and father drank coffee and tea, so he thought that grown-ups drank these, and that only babies drank milk. Of course, even though he was small Dick was no baby. Now his mother knew that milk was good for little boys, and at dinner she would say, "Dicky Boy, drink your milk now." But Dick would not, and if his mother made him do so he

would be in such a terrible humor all evening that when he went to bed he couldn't even go to sleep. He always wanted to stay up late at night, and when he did go to bed he wouldn't go to sleep for a long, long time, and he often had bad dreams in which snakes and bumble bees chased him. I guess he did have some nice dreams too, but he could never remember those.

You see Dick had no brothers or sisters to play with, and he was too little to play on the vacant lot with the bigger children, so his parents let him do as he liked most of the time and he was rather spoiled too.

One day Dick's aunt from the country came to see them, and she brought with her his little cousin Polly. Dick hadn't seen Polly for a long time. They were just exactly the same age, and here Polly was a whole head taller than Dick. This made the little boy feel badly, but he thought her the prettiest little girl that he had ever seen with her short curly hair and rosy cheeks. They played together all day, and when Polly and her mother went home they took Dick with them for a visit to the country.

Dick didn't think that he would like the country, and besides he had never been away from home by himself before. The very first thing Polly took him out to the barn to show him the new calf. He had never seen such a tiny, wobbly calf before, in fact, he couldn't remember ever having seen one before, and Polly told him that milk did not come in bottles, but straight from the barn in big pails. Dick liked the funny ducks and fat little pigs best though.

At dinner there was milk at everybody's place.

"But I don't like milk," Dick complained, "and my mama says that it isn't nice to make company do things."

"Of course, it isn't," said his aunt as she gave him a glass of cold water.

Polly finished her milk and said, "some more milk, please."

Dick just couldn't understand. Did people really like milk—grown-ups and pretty little girls?

"Now let's go to Nappy's house," cried Polly hopping up from the dinner table.

"But who's Nappy and where's her house?" asked Dick.

"Boy, haven't you ever been to her house and played with her children? Why, that's where all good little boys and girls go when they're asleep. I'm not sure, but I think that Nappy is Santa Claus' wife. Anyway she has just as many toys to play with besides flowers and gardens and boys and girls."

For the first time in his life Dick couldn't wait to go to bed. It was just like the night before Christmas, but he was afraid that he hadn't been good enough that day to be admitted to



These two children are brother and sister. The boy is ten and the girl is only eight. The little boy's dwarfish stature is possibly due to hypothyroidism in which there is a deficiency in the secretion from the thyroid gland necessary to normal and healthy growth. We do not know that such is the case, as we have not had a report from the family physician.

Nappy's house. — While he was thinking about this all of a sudden here he and Polly were in another land. It was like Fairyland and Toyland all mixed up. There were lakes with boats that would run, trains just big enough for children to ride, flowers of all kinds and children to play with.

First they took him into a shining, bright castle to see Nappy. She was all in white and wore jewels in her hair. She didn't ask the new boy's name, but said, "Why, Dicky Boy, I thought that you were never coming to see me. I've watched you peeping over the wall, but here you are and I am glad to have you. You must come every night." Then some more children came in, and they were given milk to drink from beautiful silver goblets. Dick tasted his, and it didn't taste like milk at all, he liked it. They had other things to eat, too, that looked like vegetables, but were better than candy.

Suddenly someone was shaking him by the shoulder and screeching, "Get up, get up lazy, will you!"

Dick never got up this early, but then he remembered the fat little pigs, and hurried out to see them have their breakfast. When he came in to his he drank his milk before he remembered that he disliked milk, and it didn't taste a bit bad.

At lunch he did not like anything, so he asked for his dessert, but his aunt said, "Dicky Boy, don't you play the tasting game? We always do. We don't ever eat things that we don't like, but we always taste everything that we dislike before we can have our dessert. The one who takes the biggest taste of the thing he

dislikes most without making a face wins."

This was a good game for Dick, because there were so many things for him to taste. Polly liked everything but okra and carrots, but her father didn't like lots of things, so he and Dick got to play most, and sometimes Dick won.

It was not long before Dick began to like vegetables, and he just had to have his milk and he usually drank two glasses. He still went to Nappy's too, as soon as dinner was over. Some mornings he could not remember exactly what happened at Nappy's the night before, but he always knew that he had been there, and had had a good time.

Dick was having a good time, but he missed his mother, and Polly wanted to go home with him, so they both went to the city.

Dick's mother was very pleased that her little boy had become as rosy cheeked as Polly, and had grown so much too. Dick said, "Mumsy, don't you want roses in your cheeks too?"

"Why, yes, Dicky Boy," said his mother.

"Well, all you have to do," answered Dick, "is to drink milk, play with Nappy's children lots, and win the tasting game."

"We'll show you how to play that," said Polly, and they did. It was not long until Dick's mother and father were drinking milk, and enjoying it. And they learned to like vegetables that they had never eaten before.

When fall came Dick was a big, strong boy, and he started to school. He still does not like carrots and parsnips, but he can taste them in great big tastes without making even the littlest bit of a face.

BIRTHS SHOULD BE REPORTED WITHIN FIVE DAYS

As we may consider this issue of the Bulletin somewhat in the nature of our Annual Baby Number, there is

no better time or place to call attention to the importance of properly reporting and registering all births occurring in the State promptly. In this connection we are pleased to present the following appeal from Dr. F. M. Register, director of the Bureau of Vital Statistics of the State Board of Health, who clearly and concisely calls attention to this important question.

"Let me quote a paragraph of the North Carolina Vital Statistics Law of 1913—

"'Legitimate or illegitimate: Provided that in illegitimate births, the word illegitimate shall be written across the face of the certificate, and all items on the certificates which would in any way reveal the identity of the father, mother or illegitimate child itself, shall be omitted."

"Now doctor, you can see what might happen to a legitimate child whose birth was not reported. He might be tainted with a suspicion because his birth certificate could not be produced. For instance, you attend an obstetrical case—a child is born—you are finally laid to rest, and his

parents have also gone on the long journey 'from whose bourne no traveler returns' and others who know the facts have passed away; not being able to produce a birth certificate, you see how easily he would fall under the venomous tongue of the neighborhood gossips.

Doctor! I beg of you to treat with fairness and honesty, the people who had such confidence in you and called you to attend their obstetrical cases. It is both your moral and legal duty to report every birth you attend. The great state of North Carolina has said that births must be reported, because its importance has been clearly demonstrated.

We are glad to say that there are only a few doctors in North Carolina who maliciously fail to report births, and we hope that at the end of 1930, there will not be a doctor in North Carolina who does not see the fairness in this law, and will act honestly with his patrons by reporting 'within five days' as the law requires, the births which he has attended."

A NEW BOOK ON POSTURE

Doctor Frank Howard Richardson and Dr. Winifred Johnson Hearn have recently written a most entertaining book entitled The Pre-School Child and His Posture. The book is published by G. P. Putnam's Sons of New York and sells for \$2.50. It presents a program of corrective exercises through specially devised games. In the columns of the Health Bulletin we have on numerous occasions during the last few years emphasized the ease with which postural faults could be prevented by simple physical exercises, without costly equipment, carried out for the children in any school. Our readers will remember that in the February issue of the Health Bulletin our front page cover together with several photographs in-

side illustrated some of these points. It is gratifying to us to know that the numerous beautiful illustrations in this new work of Drs. Richardson and Hearn are identically along the lines we have been promulgating for long. The book is carefully and accurately planned, the descriptions are entertaining, and the print is large and easy to read. It is a book which we take pleasure in recommending for use in the schools as well as for supplementary reading in the libraries. There is much technical information of great importance contained in the book. For example, the chapter on flat feet is one of the most interesting and instructive we have ever read. In short, the book is good from cover to cover.

From FLIES and FILTH to FOOD and FEVER.



FLIES

Are

DISEASE CARRIERS

They breed in manure and feed on filth. They carry filth on their feet and legs, and wipe it off on exposed

What To Do About It Screen and Clean Up

Screen every door and window up-stairs and down-stairs.

Don't extension use screens. Use good madeto-fit screens or tack mosquito netting over the windows.

Swat the few stray flies that dodge in at the open door.

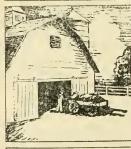
Don't tolerate open-back privies. When sewerage is not available use an approved type of sanitary toilet.

State Board of Health Raleigh, N. C.



WHERE THEY GO

FLIES-HOW TO PREVENT





DESTROY BREEDING PLACES | SCREEN DOORS AND WINDOWS



SWAT STRAY FLIES

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This six months old daughter of good North Carolina narents now living in an alien land can be described in one word—perfect. Talk about eyes, and teeth, and personality—she simply has everything.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Catarrh Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies

Fly Placards German Measles Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pellagra Public Health Laws

Prenatal Care

Sanitary Privies Scarlet Fever Smallpox Teeth Tuberculosis Tuberculosis Placards Typhoid Fever Placards Typhoid Placards Veneral Diseases Water Supplies Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C .:

Prenatal Care (by Mrs. Max West) "Our Babies" (series of nine Letters Prenatal monthly letters)
Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Babies
Hints to North Carolina Mothers Who
Want Better Bables
Table of Helghts and Welghts The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).
Baby's daily Time Cards: Under 5
months; 5 to 6 months; 7, 8, and 9
months. 10, 11, and 12 months; to 2 year to 19 months; 19 months to vears.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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VOL. XLV.

JUNE, 1930

NO. 6

THE JUNE HEALTH PROGRAM

At the beginning of the month, as every conscientious health usual, department employee and offical will quietly ask himself or herself the question, What are the most important things for us to do in Carolina during this month? ourselves the answer to that question might be put down about as follows: Every child who is to enter school this fall, no matter where living or how far from the centers of population, and who has not been examined by a competent person, to see that he is in good enough physical condition to enter school with a minimum of physical handicaps this fall. should be sought out now and this important little service rendered. Such an enterprise calls for self-denial on the part of some people. It calls for some tedious work, and for some rather dreary attention to details, but it is a kind of work that is well worth while.

Following the examination where removable defects are found which demand attention, if the child is to receive the best that the school has to give, every effort should be made to have such defects removed. This effort requires decision on the part of the parent, often self-denial; and for the children of poor people who are unable to take the necessary steps to have this important item attended to the district and community workers should see that assistance is forthcoming.

Dentists, physicians, and surgeons

and specialists will be found willing to cooperate to the fullest extent, but they cannot be expected to carry the whole load. They must receive some compensation for their service, and the children must be brought to them at such times as will mean a minimum of sacrifice to those professional workers who are expected to play the important role in removing these defects.

Following May, which is always a disastrous month for children under two years of age, the month of June always registers a high infant mortality. One of the important methods of reducing this mortality is to assure every baby that is not breast fed up to nine months old, and all of those who are above the breast feeding age, a supply of fresh clean, pure, wholesome cow's milk, or canned milk where the fresh product of assured safety is not available. Second in importance to the pure milk supply, which should be kept cool and fresh and free from contamination by house flies, is a pure safe water supply in abundance. Following these two items, it is important during this month to see that every baby is kept free from annoyance by house flies and mosquitoes, that the clothing is scant and comfortable, and during the long days that sleep in the shade and open air is assured. One of the important items for attention, if neglected in the previous month, is to see that every home is thoroughly screened with a fine wire mesh not

less than 16 or 18. The screen should be fit closely and cover every inch of open space for both windows and doors. This serves to protect against flies and mosquitoes. It not only protects the health and provides for the comfort of babies, but for all the members of the family as well.

This is the month that vacation typhoid should be borne in mind, and while the death rate from this disease has been decreasing for several years in North Carolina, it has not just happened so. Therefore for every young person or middle aged adult considering a vacation where they will come in contact with visitors from other states one of the first items of preparation should be to take typhoid vaccination.

Another item for all children under six years of age during this month should be the preventive treatment against diphtheria. Three treatments of a fresh product of toxin-antitoxin administered dermically at periods of one week apart will protect between eighty and eighty-five per cent of all children who are susceptible to diphtheria. There is little or no reaction from this vaccination. The children are not even inconvenienced at all, and it is one of the most important things that any parent or health officer can busy himself with.

It should not be necessary to even mention the necessity for intense gardening activities in this month. However, there may be some people in the State who have not yet realized the great importance that fresh vegetables and fruits are now known to exercise in promoting good health. For the benefit of these we urge renewed efforts for every householder who can to produce these food items. In these months for the residents of the cities and towns who do not have gardens-and there are many thousands such families in the Stateevery shopping tour should include a

visit to the curb market or to the commission store or grocery where fresh vegetables and fruits are on sale. This is the month when pellagra begins to take its greatest toll in lives, and the way to prevent that disease is to provide every family with the necessary variety of foods, including milk and dairy products, vegetables, fruits, and eggs.

There are many other things for all of us to consider in protecting our health at this time, but if we all attend to the items mentioned in the foregoing paragraphs, the end results will be recorded in a decreased death rate at the end of the year.



This fine little Columbus county girl was enjoying her first birthday celebration at her home in Chadbourn March 2nd. Her mother writes that she has never been sick and that "I think her good health is due to the material sent me by the State Health Department both before and after her birth, and to The Health Bulletin, of which I am a regular reader."

AND PELLAGRA WAS UNKNOWN IN NORTH CAROLINA

Many of our readers, and especially those included in what we happily call "the old-timers," we are sure have been interested in the discussion in the Bulletin during the last few years pertaining to gardens and such things. As we have stated before, the columns of this journal have frequently carried exhortations to the people for the past twenty years urging our citizens, when possible, to provide gardens and orchards, to have poultry and eggs, in short, a live at home program that is now going over the State like fire in a broom sedge field. We consider ourselves pioneers in this activity. Our chief justification for so much agitation of this question is that such a program pertains to better health.

In our morning's mail a short time ago we received a letter from one of these old time friends up in Forsyth County. We have not asked her permission, but we feel confident that she will not object to our publishing her letter. She describes in such detail the manners and customs practiced on the better class farms of a half century ago and less, that we feel confident all our other old time readers, and possibly a large proportion of the young ones, will read this letter, as we have, with abounding interest.

As our critic points out in her concluding paragraph, any farm family can have these things today just as easy as they had them forty years ago. In addition, think of the modern advantages and improvements to add to these old time supplies. In other words, we ought to be living in the grandest period of the State's history from the standpoint of making a comfortable living and supplying our own necessities, in so far as possible, in addition to finding a market for our excess produce in order to assure ourselves of all the necessities and

comforts of modern life.

We want to ask you to read her letter and to take note of the fact that it has been less than thirty years since pellagara made its appearance in North Carolina. Pellagra, being a deficiency disease and recognized now as a disease primarily caused by a faulty diet; that is, a diet in which there is not a sufficiency of the protective foods and vitamins necessary to the healthy maintenance of life, was unknown in this section when our forbears were really living at home. Dr. Edward J. Wood, the great North Carolina authority on pellagra, argued to the day of his death that pellagra came into North Carolina when they began to send out West for the corn meal and the flour, and to purchase those and other food supplies in the stores instead of raising the stuff at home, as had been the previous custom.

The letter follows:

"I read so much in the Health Bulletin and the urge from our Governor of the Live at Home plan I can't help but write you the plan my father followed 40 years ago and he wasn't reminded that he should do so by the Governor, neither was it taught in schools. I suppose it was inherited from a thrifty family. He was not a moneyed man but "my" we did have something to eat. In March the peas, onions, beets, lettuce, and salad seeds were planted in the garden. In April the corn, beans, cabbage, cucumber and tomatoes were put in. Near the fence of that garden was pie plant that furnished us pies in April. Next came a strawberry bed in the back of the garden, and next on the fence were black and red raspberries for dessert, and when they were gone the May apple was dropping and we had fruit of every kind for summer use. In August the old dry kiln was fired up, the hired

man and boys were put to bring up apples and peaches, and about three 100 lb. sacks were filled with rich dried apples and peaches, and stored in a north room. Both kinds of potatoes were stored in the cellar for winter use. There were two kinds of cabbage raised in the garden, a summer and late kind. The summer variety was made into kraut; the late ones were turned over on their sides in October and a few spades of dirt put over them to tender up. Then in December, when the hogs were killed. we dug out some of the tender cabbage, cooked with a piece of pork, and we had a dish that couldn't be beat. Corn was cracked at a nearby water mill (that's still running) to make hominy. That was a splendid dish to serve with the meats in winter. Grain was raised on our farm for bread and feed. With plenty of chickens for "Sunday dinners," eggs for breakfast, and for pudding and cakes it required very little money to live then. Nothing was bought from the store except sugar and coffee and things that could not be raised on the farm. About four barns of tobacco were raised for the money When the winter winds began to blow what consolation it was to have all kinds of food stored away, and at night run from a big log fire and crawl between two home-made blankets and sleep the sleep that doesn't bring indigestion and tired muscles.

Any healthy man can have this supply of food today just as it was made 40 years ago if he will plan and plan, and it's no "killing" job to do it."

"THE FALSE VOICE"

In a copyrighted syndicated article, which came to our desk sometime ago, by Dr. Bruce Barton, the author tells one of the finest little stories we have seen in many a moon. The idea of the false voice being heeded only by the abnormal or subnormal is so appropriate, when we think of the success of some of the nefarious so-called medicines which are advertised and sold so successfully to the sick and distressed, we cannot refrain from quoting Dr. Barton's observations.

All of us know individuals who live normal, satisfactory lives, just like their neighbors and friends, but when overtaken by illness or adversity of various kinds, their judgment becomes warped, and they seem to be unable to discriminate between the genuine and the false, especially in the realm of healing. Such people often are noted for their balanced judgment and for their discriminating powers, but when ill, from various chronic ailments which cannot pos-

sibly yield to scientific treatment, they become impatient and distressed, and frequently are exploited to the limit of their purse by fakers of various stripes.

We have in mind as these lines are being written the case of a former high official of North Carolina. He has been dead for several years and his identity shall remain anonymous. This man built up a considerable fortune by his thrift, his industry, and his sound judgment. In younger years he was a very successful lawyer. In late middle age he held one of the important State offices in North Carolina. As he approached the years of three score and ten his arteries were hardened, the cells in his kidneys could not function as formerly, the valves of his heart were diseased, and altogether the possibility of recovering normal and active health was out of the question. In the hands of a thoroughly competent physician, who recognized his condition and who told

him the facts fairly and squarely and who advised a careful daily regime, he could have lived on a great many years longer in a fair degree of comfort. But he became impatient with the restricted diet and with the other hygienic measures and inhibitions which were necessary for him to follow in order to live with his troubles instead of dying of them.

About the time he had decided that his physician was applying too many restrictions, and that his progress back to sound health was not as rapid as he thought it ought to be, one of these itinerant traveling fakers, sailing under the sacred name of diet specialists, blew into town. The temporary headquarters of the faker immediately became packed with such sufferers as our friend. Among the others, he sought the panacea ever offered by the false voice. The faker extracted five hundred dollars from him in exchange for some "diet slips" stating what he might and might not eat, all nicely printed, ready-made, and covering the ground thoroughly for any patient, no matter what ailed him, from six months and up. But unfortunately along with the diet slips the faker also prescribed "a little harmless drug, to be taken in drop doses, whenever he felt the need of pepping up." Later events revealed that the drops proved to be a powerful preparation of digitalis. The excessive doses buoyed up the victim for a few days. He thought the false voice was literally the voice of God.

To end the story, the victim died within a few days after beginning the drops, and after the faker had passed on to other pastures; but at least six or eight years before our friend needed to have died.

Read Dr. Barton's observations on

"Do We Put Too Much Emphasis On Health"

"A man who knows Scotland told

me of his experience with a Scotch shepherd.

"The shepherd seemed to have an uncanny power over the sheep. When he sent out his own peculiar call every one of them, no matter how distant, raised his head and started straight for home.

"The visitor begged for a chance to try his calling powers. He cupped his hands over his mouth and emitted a noise which to his own ears sounded exactly like the shepherd's call.

"Not a single sheep responded.

"'Don't be discouraged,' said the shepherd. 'Try again. Maybe there is a sick one in the flock and, if so, he will listen to you. When sheep are healthy they wil follow only their own shepherd, but a sick one may go off after anybody.'

"Every once in a while somebody rises up to criticize us modern parents for devoting too much time and attention to our children's physical well-being.

"Says such a critic: 'Of course, the body is important, but it was given to us not to be exalted but to be disciplined and put down. To lay so much emphasis on the physical is paganism. Our righteous ancestors disregarded the body and paid attention to their souls.'

"This is true, and it might be added that our ancestors, by neglecting their bodies in the interests of their souls, beat us to Heaven by an average of twenty years. They matured young, worried much, and died in what we now regard as early middle life.

"Moreover, I have always questioned whether they were truly religious, whether it is possible to be religious in the best sense if one is sick and ruled by fears.

"Old Simeon Stylites believed that it is the business of a saint to mortify the body. He chained himself to the top of a pillar, and became so loathsome that worms lived in his flesh, and he did not attempt to pick them out because he regarded his sufferings as a means of grace.

"How such an idea could have been born out of the teachings of the healthy out-doors Jesus is one of the mysteries of the ages. He mortified no bodies. He healed them, built them up, and sent their owners on their way rejoicing.

"St. Paul, the great disciple, loved games, races and fights.

"If it be argued that most of the pholosophers have been men of poor health, I venture to contend that the world has more philosophy than it needs or can ever use. And that what is more important is more normal, laughing optimistic women and men..

"Health is prophylactic. A healthy boy would much rather go to a ball park than a saloon.

"It's the weak, nervous creatures who demand the stimulus of dissipation. Just as the weak sick sheep go off when a false voice calls."

THE YOUNG MOTHER'S CLUB TALKS ABOUT COOKING FOR CHILDREN

By SUDIE E. PYATT

"Girls, at our meeting last week we decided to invite Mrs. Ross to meet with us again this week to talk about cooking for children, following up her talk to us last week on feeding the child from two to six," Mrs. Henry Casteel, president of the Young Mothers' Club of Crafton, said, opening the regular weekly meeting of the club, which was being held at her own home that afternoon. "We will now turn the meeting over to Mrs. Ross."

Mrs. Julian Ross, mother, nurse and dietetic specialist, who had written several excellent books on child care and feeding, arose with a smile, after Mrs. Casteel's introduction and took her place behind a kitchen table on which was arranged an assortment of cooking utensils.

"The preparation of food is almost as important as the kind of food," Mrs. Ross began, holding up a standard, eight-ounce measuring cup. "In following recipes measurements are always to be closely watched in order to obtain the best results. Use a standard, eight-ounce measuring cup, a set of measuring spoons,

tablespoon, teaspoon, one-half teaspoon, and one-quarter teaspoon, and level dry materials, and heavy liquids, such as molasses, and honey with a knife."

"I have never known just what cooking utensils were helpful in cooking for children," the club president said, following Mrs. Ross' mention of measurements.

"Your measuring cup and your measuring spoon set are two of your most helpful utensils," Mrs. Ross answered, placing the measuring cup and spoons back on the table and taking up two pint size, aluminum double boilers. "These are indispensable in cooking for children, as are two small aluminum sauce pans, a fruit press or ricer, a large mesh, medium mesh and small mesh strainer, custard cups, steamer, small pyrex baking dish, brush for scrubbing vegetables, and a small baking device to be used on top of the stove in summer. Use enamel ware for acid foods, never tin. Aluminum is best used for cooking all foods, except acid, eggs, and potatoes. For cooking cereals, heating milk, reheating potatoes and such things use a double boiler, or a pan set in hot water."

"That is fine, Mrs. Ross, but won't you give us some suggestions for saving time in cooking before you go on to something else?" Mrs. Casteel asked.

Mrs. Ross smiled, "Yes, the time element is very important for busy, modern mothers. To save time in cooking use cooking devices which do not need watching and will do long slow cooking; such as automatic electric fireless cookers, an asbestos lined oven with a thermostat. Make your menus, and do your shopping once or twice a week, and when you make up your shopping lists use your ready-made menus to help make it up quickly."

"Are soups and broths really as good for children as everyone seems to think they are!" Mrs. Paul Helms, who was the mother of a young son and daughter, asked.

"Why, Hermoine, certainly soups are valuable for children," Mrs. Lester Patterson remonstrated with Mrs. Helms, who was sitting next to her, using Mrs. Patterson's given name as she did so.

"You are right, Mrs. Patterson, soups are good for children," Mrs. Ross agreed. "Soups for children can be made with meat, or without meat, and both, if properly made are equally nutritious and healthful for the young folks. There are six main principles in making soup for children that I will touch on briefly while we are on the subject of soups. Salt is the only seasoning that is best used in soups for children. If strong seasonings are used they blunt the child's taste for natural meat and vegetable flavors. A few clean vegetable peelings, or unpeeled vegetables cooked with meats add flavor, and supply many mineral salts and vitamines that help little boys and girls to grow big and

strong. Excess liquid on vegetables after cooking may be used in place of water in making soup. Cook meats for soup the day before, and remove fat before using the stock in making soup. All meats and vegetables for soup for little folks are to be cooked slowly. The fireless cooker may be used to advantage. Cook all vegetables used for soup together, and add them to the broth after the meat and fat have been removed from it."

"Vegetables are always a problem for me," Mrs. Ernest Swarts, sighed.

"Don't be discouraged, Martha," Mrs. Ross smiled at Mrs. Swarts. "The vitamines and cellulose in vegetables make them very valuable for growing children. Properly cooked and served children like vegetables just as well as they do other foods. There are a few points in cooking



This Chapel Hill baby is six months old and is not worried about a thing in the world.

vegetables that I will call to your attention.

"First, always have your vegetables as fresh as it is possible to secure them. Slightly wilted vegetables may be revived by placing them in cold water for fifteen minutes. Don't use old, pithy, stringy vegetables, better used canned ones, than these. Always start your vegetables to cook in hot water. Don't add your salt until near the end of the cooking, and don't use soda in cooking vegetables. A small amount of soda may be added to dried beans or peas that are used for soup, but not to green vegetables.

"Underdone, cooked-to-death, overseasoned, scorched or soggy vegetables served a child may make him dislike this particular vegetable for In cleaning vegetables use running water for washing, and a brush for root vegetables. Let as 'Thinly as possible' be your guiding rule for peeling vegetables, for in vegetables 'It's what's under the skin that counts,' Dr. Lulu H. Peters says. Use canned vegetables occasionally for variety. No matter what vegetable you cook always try to make your object in cooking it the bringing out of the natural vegetable flavor. Save the liquid in which delicately flavored vegetables have been cooked to make soup. If properly cooked practically all vegetables may be served children."

"I never know just how long vegetables should be cooked," Mrs. Henry Patterson said, as Mrs. Ross finished her discussion of vegetable cooking.

"I anticipated that, Gladys," Mrs. Ross, said, holding out some type-written sheets. "Will you distribute these to the girls, and take one for yourself."

"You see this is a time table for the cooking of different kinds of vegetables, and you will notice that the shortest time for cooking vegetables is given as fifteen minutes to twenty minutes for young cabbage, and the longest time, is one hour for strong beans.

"Vegetables that may be cooked fifteen minutes or more are: Asparagus, 15-35 minutes; Brussel sprouts, 15-30 minutes; Spinach, 15-35 minutes; Summer Squash, 15-30 minutes; Tomatoes, 15-20 minutes. In the twenty minute group we find cauliflower, peas and potatoes, potatoes and cauliflower may take from twenty to forty minutes for potatoes and from twenty to thirty minutes for cauliflower. Cauliflower, like cabbage should not be over-cooked. Beets, carrots, onions, and string beans require longer for cooking than the other vegetables, usually from forty minutes to an hour for all four."

"Now, what would you like to have



One of our nurses sends in this photograph of a Columbus county family group. They are tenant farmers, but the type that will soon own their own farm. The nurse says it was the neatest, the healthiest little family she saw last winter. The picture was taken February 28, a warm sunshiny day, while the family were on the way to grandma's. The oldest child was a little over five years and the baby three months at time photograph was taken. We will ask the Columbus county health officer whether or not they have all been protected against typhoid, diphtheria and smallpox.

me talk about next?" Mrs. Ross asked the eager group of young mothers.

"Bread!" came the simultaneous reply from everyone of the mothers.

"All right, bread it shall be," Mrs. Ross responded, "and I am going to begin talking about bread by bringing up one of the child's best bread friends, whole wheat bread. Use it regularly for the minerals it contains. and help the child to form a good eating habit that will be an aid to him all through his life. Bread is not good for a child on the day it is first made. Serve it on the second and third days, and cut part of the loaf into thin slices and dry it in a slow oven until it is crisp. It is not a good idea to spread butter on toast or hard bread for children, while the toast or bread is hot.

"Limit your servings of crackers to the crisp, unsweetened kind, that the child will have to chew. Exercise for the teeth can be secured by giving the child dry whole wheat bread and crackers. It is important to remember this, too, for many of the foods fed children do not allow for any exercise of the teeth. Hot corn breads, muffins, biscuits and pan cakes may be given to the child over two if they are well cooked, and served in not too large portions. Use any standard recipe for making bread or toast.

"Cereals are my main problem when it comes to cooking for Richard," Mrs. Morton Wright, whose name was Clara, said, after the bread discussion.

Half a dozen other mothers agreed with Mrs. Wright that cereals were a problem with them, and Mrs. Ross took up the matter of cereals.

"Cereals may be divided into three main classes, whole-grain cereals, such as cracked wheat, steel cut oats, yellow cornmeal, and natural brown rice; semi-prepared cereals, wheatena, rolled oats, farina, polished rice, and entirely prepared cereals, shredded wheat, cornflakes and puff-

ed rice. Of all the cereals the whole-grain ones are the best, but the hardest to prepare for children. Minerals and vitamines so necessary for the growth of young bodies are found in greater proportion in the first group than in either of the other two groups. The semi-prepared group contains some of the necessary minerals and vitamines, the entirely prepared group, a smaller amount of these minerals and vitamines than either of the other two groups.

"One of the most important things to remember in the preparation of whole-grain cereals, is that they must be cooked for a long time, usually from one and one-half to two hours or even more. In cooking this group of cereals an automatic electric fireless cooker is excellent. It is not necessary to cook semi-prepared cereals as long as the whole-grain ones, but be sure they are well-done when served. Prepared cereals may be made more palatable by crisping them in the oven a few minutes before serving."

"What about eggs for young children?" Mrs. Harold Ziegler asked next.

"Freshness is the first requisite of an egg, and fresh eggs served in moderation are a necessary food for chlidren. The yolk of the egg contains more food value for the child than does the white. When eggs do not appear to agree with a certain child it is often not the fault of eggs themselves, but the fault of the particular eggs served to the child, as stale eggs, improperly cooked eggs, or the excessive use of eggs may cause the child to have indigestion.

"Since it is so important that fresh eggs, only, be served to children, I am going to give you four points for distinguishing a fresh egg. The shell of a fresh egg is slightly rough to the touch. A fresh egg will lie on its side in the bottom of a pan of water. A bad egg will float to the

top of the water. On opening a fresh egg there will be no bad odor. The yolk of a fresh egg does not break easily, and the white does not scatter widely. Coddled, poached and scrambled eggs, are good ways for serving eggs to children."

"Are fish suitable for serving to children!" Mrs. Henry Casteel asked, as Mrs. Ross looked about the room, and asked for queries for discussion.

"Fish are as suitable as any other food for children, but the child should eat only lean white fish, such as halibut, haddock, cod, and flounder. Fish for children may be baked, boiled or broiled."

"How are meats to give to children best cooked?" Mrs. Janet Fisher asked, next.

"Broiling, roasting and stewing, are three wholesome ways of cooking meats for children. Only the tender pieces of beef, chicken or lamb should be given children. Meat that is coated with hot fat, as it is when fried is never good for a child. Gravy, and sauces rich with fat or cream are to be avoided in the child's meat diet. The meat may be seasoned with a little buter and salt just as the meat is ready for the table, or a milk sauce made with milk, butter, and salt. A gravy which is not greasy is made with a milk sauce and meat juice.

"Bacon may be nicely cooked by placing it on a wire frame over a pan and cooking it in a hot oven until most of the fat drips out and it becomes crisp. If cooked in a hot pan over the fire, drain the pieces of bacon on brown paper before serving. Roasting may be used for cooking beef, chicken, or lamb for children, using the recipes given in any standard cook book."

"You mentioned fruits quite frequently in your talk to us last week on menus and diets, Mrs. Ross. What are the best ways of cooking fruits for children?" Mrs. Lester Patterson asked.

"Fruit is always best given raw, unless the doctor advises cooking it. If the fruits are served cooked to children they are best cooked, either by stewing them, or baking. I always prefer serving fruit and fruit juices to children without sweetening, as ripe raw fruits and dried fruits contain sweetness of their own. Sometimes sugar may be used, but be careful not to make the fruits or fruit juices too sweet, for this has a tendency to ruin the child's natural taste for the plain fruit."

'Are desserts useful in the child's diet?" Mrs. Theodore Rudolph, who was the mother of two growing young sons, asked.

"Most assuredly desserts are useful in the child's diet," Mrs. Ross quickly answered Mrs. Rudoph's "Desserts give the mother query. many opportunities of serving foods, particularly milk in guises that are pleasing to the child, and if too much sugar, and strong flavoring are avoided, desserts can be made that have much food value for children. For flavoring I always prefer the natural flavoring such as, lemon juice, molasses, brown sugar, honey and fruit juices. These have several advantages. No love is created for excessively sweet food, the real unadulterated flavors of fruit juices, molasses and honey are natural flavors that it is well to train the child to like, and the child is not tempted to overeat foods excessively flavored for artificial stimulation.

"Any standard recipes for desserts that meet the requirements I stated are suitable to use for desserts for children."

"What do you think of letting chilren over four have an occasional picnic during the summer months?" Mrs. Henry Casteel questioned.

"Children enjoy eating in the open air, if it is only in their own backyards. I think an occasional picnic, if it is only in the backyard, or on the lawns of their own home, is a fine thing for children. The one unfavorable feature of picnics is that children frequently become excited and overtired at a picnic. If the child is taken away from home on a trip of any length for a picnic, watch it to see that it does not become overexcited or fatigued.

"If you are going on a long automobile trip and taking the children along, powdered milk may be used. A thermos bottle, or an 'Icy-Hot' will take care of the problem of hot foods. or these may be prepared over a camp fire. Frozen desserts are ideally kept in a vacuum freezer. Bread, butter, milk and fruit will suffice for the supper for a child who is off on an auto trip. A nice menu for a picnic lunch for young children consists of egg yolk and lettuce sandwiches. graham bread and butter, honey sandwich, a perfectly ripe pear, gingerbread, gelatin blanc mange or milk."

"Mother, before you complete your talk this afternoon I wish you would tell us how to stock an emergency shelf for children," Mrs. William Batchelor, Mrs. Ross' daughter, who was the mother of a two-year-old son, suggested.

"Certainly, I'll be glad to make suggestions for the emergency shelf, which every mother should have for her children, as well as for unexpected company, and the other things for which good housewives keep emergency shelves.

"On your emergency shelf for the little ones it is a good idea to keep a can of broth, one can of the best grade tomatoes, a can of unsweetened, evaporated milk, one jar of powdered or malted milk, one box of graham crackers, one box of cookies, one box of shredded wheat, one can of apple sauce or prunes, to be used when fresh fruits are not available, one can of peas, string beans, and spinach, and one can of pea soup.

The vegetables on your emergency shelf may be used when for any reason you can't procure fresh vegetables, or you haven't time to prepare and cook fresh vegetables."

"I'd like to know something about the number of calories a healthy boy and girl from two to six years should have each day," Mrs. Paul Helms spoke quickly, as Mrs. Ross asked the mothers to tell her of things pertaining to cooking for, or feeding children, on which they wished special information before her talk was over.

"You all have pencil and paper," Mrs. Ross looked over the gathering of interested young mothers. "I have a table there, which was taken from 'Chemistry of Food and Nutrition,' writen by Henry G. Sherman, Ph. D. It is short, so you will have little difficulty in following it. The age is given first, then the calories per day for healthy children, boys first, then girls."

This is the table of calories that the young mother's copied in their notebooks:

Calories Per Day for Healthy Children

Age		
Years	Boys	Girls
23	10001300	9801280
3-4	11001400	10601360
45	1200-1500	1140-1440
56	13001600	1200-1520

As an explanation of the caloric value of some important foods, Mrs. Ross told the mothers that one baker's slice of white bread, weighing one ounce, contained 80 calories. A slice of whole wheat bread, she said, contained 106 calories, and a slice of graham bread contained 80 calories. One cup of whole milk, weighing eight ounces, contained 170 calories, one egg contained 75 calories, 60 of these calories being in the yolk, and only 15 in the white of the egg. A portion of chicken, weighing 3½ ounces would contain 218 calories if

the chicken were a capon, and ordinary chicken roast, would contain 181 calories in a serving of 3½ ounces.

"I think, girls," Mrs. Henry Casteel said, as Mrs. Ross completed her explanaiton of calories, "that before we leave this meeting today we all want to make some new resolutions for the feeding of our children, and that we want to make them in such form that they may be incorporated in the minutes of our club."

"I move that we ask Mrs. Ross to suggest some resolutions for us," Mrs. Ernest Swarts said, while Mrs. Harold Ziegler seconded the motion, and Mrs. Ross graciously met the young mothers' requests for some feeding resolutions by giving the mothers the following eight resolutions, which they accepted without discussion and placed in the minutes of their club meeting for that day.

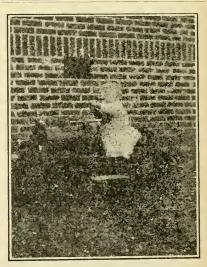
The Resolutions

- 1. I will try to have the meals attractive and help everyone to be cheerful while eating.
- I will serve meals at regular hours and allow no food between meals.
- 3. I will see that the food is well cooked and that the menus are carefully planned.
- 4. I will allow no candy (except in place of a sweet dessert at noon).
- 5. I will teach my child to drink at least a pint of milk a day.
- 6. I will train my child to eat everything served to him as any polite guest at my table should.
- 7. I will teach my child to eat slowly, chew well, and not play at meals.
- 8. I will teach my child to learn to like what will make him "grow big and strong," and not beg for foods that will not help.

When the resolutions had been read and accepted by the Mothers' Club, the president told the club members that they had all secured so much worthwhile information from Mrs. Ross' talks, that she felt it would be an excellent thing for them to plan to have an authority on health or child care visit their club and talk to them, or give them a demonstration, along some line dealing with the health and care of children, at least once every month.

The members of the club enthusiastically accepted Mrs. Casteel's suggestion, and they planned to have a physician, if possible, if not a registered nurse, talk to them at their meeting for the first week in July on first aid in the home.

Note: The account of the meeting of the Mothers' Club of Crafton, when they will hear a talk on "First Aid in the Home" will be given in the July issue of the Health Bulletin.



This is a picture of the five months old son of an official of the Carolina Power and Light Company. Starting his experiments in power development at this early age he may equal Edison some day.

VARICOSE VEINS OF THE LEGS

By Verne S. Caviness, M. D. (Fellow American College of Physicians)

Varicose Veins are elongated, permanently dilated, tortuous veins with thickened walls. The most frequent occurrence is in the large veins of the legs, especially the Internal and External Saphenous Veins.

Occurrence

The condition is most frequently observed in women in middle life. Men are much less frequently affected than women. The principal difference in involvement lies in that pregnancy is the strongest predisposing influence we note. Mode of dress also is an important factor: garters or other tight constrictions above the knees have a great tendency to obstruct the return flow of blood in the veins. Persons who are overweight are especially prone to develop varicose veins.

Varicose Veins are frequently present in youth, but the involvement is usually in the deeper veins and not recognized until middle life when the superficial veins become visibly involved. Frequently other veins are also involved, but the veins of the legs are involved with a greater frequency than any other veins.

Structural Changes

This condition begins as a simple dilatation, extending over a greater or lesser length of the vein. The dilatation is usually uniform at the beginning, but as it progresses, it becomes sacculated or fusiform and these in turn, may contain blood clots. Infection often follows with the concomitant increased swelling, redness and pain. The arteries also, at times in the more severe cases, are involved with symptoms similar to the symptoms of varicosities of the

veins. Symptoms are much more marked after the process becomes sufficiently extensive to produce a loss of function of the valves in the veins. This results in the weight of the entire column of blood up to the heart being placed on the walls of the smaller veins in the legs.

Causes of Varicose Veins

The first cause of Varicose Veins is probably at least indirectly a weakness of the vein walls. This may be either a hereditary tendency or it may be acquired, as from phlebitis; this latter condition is often termed "Milk Leg," and is especially likely to follow pregnancy or some types of surgical operations. There is an interesting tendency running throughout some families to develop varicose veins.

The second cause is a retardation of the circulation in the veins. Chronic diseases of the heart or lungs are frequent offenders in this respect. Persons who stand a great part of their time, granting the existence of inherently weak veins, are particularly liable to develop varicose veins. Another important etiological factor in their development is obstruction to the return flow of blood in the veins from any portion of the body, but especially from the lower extrem-Garters were long considered to be prime offenders in this respect. especially during pregnancy; now, however, due to changing styles and customs, tight garters are not worn so much. Various tumors when situated so as to obstruct the venous flow produce varicose veins in any part of the body. A similar blockage of the return flow of venous

blood may be produced in the female by the uterus whenever enlarged by pregnancy or if displaced. The symptoms will vary with the degree of enlargement or displacement.

The third cause is compensatory dilatation resulting from blockage of the deep veins. There may be many causes for such a deep blockage, but the resulting varicose veins are Nature's effort to reestablish a disturbed circulation. Such veins may produce severe symptoms, but great care must be exercised not to obliterate them; other more palliative measures must be used.

The fourth results from aneurysms. Fortunately, such cases are rare, and usually due to injuries.

Symptoms

In simple, uncomplicated cases, the symptoms are rather typical. earliest symptom is usually pain in the leg, often in the back part of the leg, and pain in the sole of the foot. Especially if the involvement is of the deep veins only, it may be mistaken for Sciatica. The next symptom is likely to be heaviness of the leg and foot, with a tendency to let the foot or heel drag when walking. Next, the reason for the feeling of heaviness becomes apparent as edema or swelling of the parts involved appears. Muscular cramps are often present and at times quite severe.

We find that both legs are involved in about seventy per cent of cases, the left leg alone in twenty per cent of cases, and the right leg alone in ten per cent of cases. Even when there is involvement of both legs, the left is usually worse. This is on account of the arrangement of the Iliac Veins in the lower abdomen.

Complications

The symptoms of varicose veins are aggravated by the complications. All simple symptoms remain, but there are other symptoms that appear with various complications.

Varicose veins often rupture. Such rupture may be the result of a blow, from coughing or straining, or from any form of injury to the already damaged vein wall. Often varicose ulcers erode into the wall of the vein and severe hemorrhage is the result. In the event of rupture of a vein hemorrhage is profuse, much more so than under normal conditions. This is easily understood since the vein walls have lost their tone and are stretched to such an extent that they do not collapse; also, bleeding occurs from both sides of the rupture.

Ulceration is undoubtedly the most unsightly, as well as a very annoying complication of varicose veins. It is a result of the rupture of a superficial varix; it may be the result of a perivenous abscess; or it may start in a scratch; an area of eczema; or be a result of capillary thrombosis, which is a blocking of the smallest blood vessels. This can occur from many causes in varicose veins.

Thrombophlebitis, blood clotting in the veins, is an occasional complication that is not only painful, but is often quite serious. Fortunately it is usually localized to a relatively small segment of vein.

Thrombophlebitis often becomes infected; the infection may spread to surrounding tissues, involving muscles, nerves, bones or skin, and thus give inflammation of such of these tissues as are involved. The results are painful and at times fatal; radical surgical procedures are necessary in some cases. When there is extension to the skin, ulcers or eczema are likely to result. The lymphatics may also be involved in severe cases.

Treatment

The treatment of varicose veins may be palliative, radical, or by means of injections.

Palliative: This form of treatment is definitely indicated in early mild cases, during pregnancy and June. 1930

also when the deeper veins are involved. The treatment consists first, in the removal of the cause, so far as possible. Tight garters, or other forms of tight dress constricting the leg or abdomen should be removed. Gentle massage of the skin is beneficial if the skin is healthy; it is contraindicated if there is eczema, discoloration, or other involvement of the skin. The elimination must receive very careful attention: constipation is a serious foe to good veins, and is far more serious when the veins are below par. Heart or lung disorders are also quite potent agents for increasing the extent of involvement in veins that are varicosed; such disorders should receive careful attention on general principles, but are especially important in the treatment of varicose veins. Also, elastic stockings, or elastic bandages, carefully put on, should be worn constantly when out of bed. Either should be removed at night and the legs rubbed well with alcohol.

With the exception of the elastic stockings and bandages referred to above, all these measures are indicated in the treatment of any case of varicose veins by any method.

Radical: The indications for radical treatment are the same as for the injection treatment. For many years the radical surgical removal of varicose veins was the treatment of choice in all cases. It is still used by some surgeons, and quite good results are obtained by it. The element of danger is reasonably small, and when the veins have been removed, it will be impossible for new channels to be opened along the old varicose courses.

Injection: This is a form of treatment by which persons who suffer from varicose veins may often be relieved almost without pain, and without the necessity of a prolonged stay in bed. Various solutions are used, chief of which may be mentioned

Sodium Salicylate, Glucose, Sodium Chloride, and Quinine with Urethane. Any one of these preparations will satisfactory results in most cases when used by skilled hands. The solution is injected into the varicose pouches and allowed to remain at the site of injection for a few minutes; this does not clot the blood, but it produces an inflammatory process in the inner coats of the veins that is later replaced by connective tissue, the walls of the veins are drawn together, and the channel is permanently obliterated. Pain is very slight or absent, almost never so severe as the usual pain from the varices themselves.

The indications for the injection treatment of varicose veins are many. Any case of varicose veins in which there is a back flow of blood from the heart, due to failure of function of the vein valves, should be treated unless there is some definite contraindication. However, there are types that demand especial care and that represent unusual indications of the necessity for treatment. these may be mentioned thin walled sacs or diverticula that are about to burst; whenever ulcers or eczematous patches refuse to heal; pain,this is often very severe, and at times so severe as to prevent much activity; thrombosis,-clotting of the blood in the veins; whenever a portion of the varix is situated over the crest of the tibia; incompetent valves,-allowing the blood to flow in the wrong direction in the veins involved.

Prognosis

The usual end result of the injection method of treatment is a complete cure. The veins become obliterated, they become hard cords which become smaller and smaller as contraction takes place. These cords gradually fade from view and become less palpable. As veins, they will no longer exist. The blood flow

will continue through the deeper vessels, and through the normal superficial vessels. Unless there be an extensive involvement of the deeper veins, there should rsult a complete relief from symptoms. If due diligence be exercised in relieving the causes of the condition, there should be very little or no recurrence.

With reference to modes of dress, now that the styles and customs do not decree tight constrictions about the legs and abdomen, there is every reason to believe that there should be much less occasion for varicose veins in the people who will be middle aged during the next few years.

Also, as more people secure for themselves an annual health examination, preferably as a birthday present to themselves, such defects can be detected early, and often relieved by palliative treatment before the process becomes so extensive as to necessitate more extensive measures.

WHY I PLANT A GARDEN

By

WALLACE F. MUSTIAN, D.D.S.

I plant a garden because I believe it is the greatest asset a man can have, especially a professional man or office worker. A good vegetable garden means health, money, recreation, and happiness. It gives me the proper amount of fresh food, and vitamins for myself and family the year round. Vegetables freshly pulled are much easier digested and healthier than those gathered for several days. I have a wife and two children, they are healthy and well developed in every way. My little girl age 8 and a boy age 4 are perfect specimens of health including their bone and tooth development. I attribute this largely to fresh vegetables grown in my garden.

There are many vegetables that I can not get living in a small town; for instance, asparagus, rhubarb, carrots, spinach, egg plant, salsify or oyster plant, cauliflower, kohl rabi, endive, parsnips, berries, and grapes of different varieties as well as the regular vegetables; all these and many more I endeavor to raise myself.

Another reason is that I am very fond of home canned vegetables in

the winter. If vegetables are to keep well they should be gathered not more than one hour before canning. My wife always cans an ample supply of okra, tomatoes, string beans, lima or butter beans, corn, squash, asparagus and berries, etc. for winter consumption.

Perhaps the greatest reason is, I am in my office all day and get very little fresh air, exercise and diversion. A few hours work in the garden every morning before I go to work gives my muscles and body the proper amount of stimulation and exercise and fills my lungs full of needed fresh air. This puts pep and enthusiasm in my work during the long strenuous hours of the day. On my return in the afternoon just to take a little walk through my garden watching each plant very carefully, its nature and how much it has grown relieves my mind from its nervous tension and I relax from the trials of the day perhaps to a greater extent than I could in any other way. There is nothing more fascinating to a tired business and professional man than to go out after a hard and trying day and gather fresh strawberries, raspberries, onions, spinach, lettuce, peas, etc. of your own raising.

There must be something in every life to break the monotony—to relieve the nervous tension—to give it relish and zest and beauty. Everybody must have a pop-off valve, so to speak—a hobby. The means are always at hand through a garden.

Gardening has no rival as a means of putting color into life for it has a quadruple reaction. First, there is the joy of making things grow; second, there is the increased health and vigor that come from that form of labor; third, there is the fun of beautifying that part of the world, no matter how small.

My garden directly and indirectly saves me doctors, hospital and dental bills, increases my income and pays my taxes. My garden is my golf field for which my game is my gain in health, happiness and prosperity.

NARCOTICS

From School Address of J. W. ASHBY, M. D.

George Bernard Shaw makes the statement that it is futile to advocate prohibition to an individual who wishes to drink in order to forget his misery. But it is a far cry from the subject of his remarks to an audience such as we have before us today who represent cheerfulness and happiness and who have the best years of their lives before them. But it is not such a far cry between the effects of the alcohol which he mentioned and the effects of narcotic drugs about which we are going to say a few words. Each is indulged in for the same reason and because the individual is of the introverted type and wishes to be extroverted. The normal person does not fall a victim to the drug habit, but it is the psychopathic individual, who wishes to escape the trials and stress of life. It is the line of least resistance and is frequently entered into without the thought of the dreadful consequences.

Morphine heads the list of narcotic drugs. It cannot be legally obtained without a physician's prescription and the physician who prescribes it and the druggist who furnish it are required by the Harrison Narcotic Law to state for whom it is prescribed and to whom furnished. But like a good many other things there are illegal dealers in morphine who might be termed bootleggers. Unfortunate-

ly doctors are sometimes careless in giving this drug. A midnight call, a patient in distress, real or imaginary—a hypodermic injection morphine and the patient is soon asleep; also the doctor. If the distress is due to the lowering of consciousness of the patient or disintegration of the nervous system the person realizes the fact and soon learns to resort to the use of the drug without the aid and expense of the physician, and we must add in fairness to the average physician that they are careful in such matters but it is the man who isn't careful and the first dose that does the damage. The continued use of morphine or its derivatives lowers the vitality of any person and alters one's entire personality. They become anemic, have a sallow complexion and their mental and moral tone are decidedly lower. They cannot be trusted and prevaricate from choice. Luminal and veronal are two other drugs that claim their proportion of victims and also many of the so called coal tar products which are used to allay pain; and unfortunately Luminal, Veronal and the Coal Tar products can be obtained without a prescription. Veronal is exceedingly dangerous and more than one person has died from the effects of an overdose. Only recently a brilliant young authoress from Atlanta died in New York from taking too much of this drug. They are taken to produce sleep—as a hypnotic, but like their ally, morphine, one dose soon does not have the desired effect and the dose is increased and increased until bordering on the line that threatens life and always impairs one's usefulness to society.

Insomnia and "nervousness" are the excuse for taking these drugs. Sleeplessness is frequently due to a keyed up condition of the nervous system and to hyper-tonia of the muscular system. Many people are too tired to sleep due to the increased tension of the muscles. Drugs will not improve conditions but only produce a habit. Massage will produce sleep and is harmless.

The nervousness is merely a symptom. Freud defines "a neurosis as a negative for a perversion."

As stated before the normal person needs only a word of caution on the narcotic subject, but the psychopathic person will need careful scrutiny and should be warned and watched. It is quite likely that the person of this type will display abnormal psychological traits early in life and prior to reaching the stage of being classed as a Drug Addict.

WHEN YOU ARE SICK IN YOUR IMAGINATION

"Yes sir," said Mr. Joe Benton, the able philosopher of Benton Heights, "there is a lot in faith healing. I know what it can do for you. It cured me of heart disease."

Mr. Benton was giving a confidential interview to the Journal and Judge W. O. Lemmond as the three met on the corner this morning. Mr. Benton is one of those men who has his own ideas about everything and in about 99 shots out of a hundred he is right. He generally has the right sow by the ear.

"Lots of people are cured by faith. It doesn't cost them anything and it helps them a lot. When I was in my fifteenth year I became subject to pains in the neighborhood of my heart. One of our neighbors, an old man, had died of heart disease and I heard a good deal of talk about it. My pains got worse and I was sure I had heart disease. My mother thought so, too. She kept me pretty quiet and I did not work any for a year.

'At last I went to my mother and told her that I thought I was likely to drop dead any time and she said I must go to the doctor. She told

me to get a mule and ride very slowly to Monroe and see Dr. Ramsey. I never let the mule get out of a walk. I finally got to town, slopped gently off my mule and hitched him in the rear of Dr. Ramsey's office where Sam Hart's store is now.

"I went in and Dr. Ramsey asked me what I wanted. I told him I had heart disease and thought I ought to have some medicine. He wanted to know who told me I had heart disease and I told him I knew it myself, and described my symptoms and said I had not worked in a year.

"'You run up those steps just as fast as you can and then down as fast as you can, and then come in here and I'll look at you,' he said. I told him it would kill me but he said go ahead anyway, and I did. I thought I was going to die anyway and it didn't make any difference.

'After I had run up and down the steps, he examined my heart and said that it was as good a heart as anybody ever had and that the pains came from some nerves across the chest and for me to go on back home and go to work, the harder the better, and the pains would leave.

"Well, I never felt so good in my

life. When he told me my heart was as good as anybody's I was happy. I felt like a new person. I got on my mule and cut out for home and I didn't let him walk any, either. I was

no longer afraid of jolts. I never had any more heart disease. Yes, sir, when you are sick in your imagination, faith cure is a fine thing. It will cure you."—Monroe Journal.

CITY MILK SUPPLY RATING

By

BUREAU OF SANITARY ENGINEERING

In 1924, when the sanitation of milk supplies first became an activity of the State Board of Health, 21 cities of the State had milk ordinances and were endeavoring to provide their citizens with a clean product. Since no two of the ordinances were identical, it was impossible to judge whether the quality of milk in one city were better or worse than that of another. The minimum requirements for the production of milk had not been definitely settled by the various health officers, and grading was being done in only two or Moreover, since there three cities. were no uniform requirements for the grades, Grade A milk in one city was quite a different article from Grade A milk in another, though they might appear to be the same in the public mind.

In 1924 a Standard Milk Ordinance was recommended to the cities of the State for their local adoption. This ordinance was described in detail in The Health Bulletin, June 1927, P. 13, at which time it had been adopted by 37 cities. At the present writing it is in effect in 64 cities. Among the advantages derived by this wide adoption of one ordinance, the most evident is, of course, the agreement on the minimum requirements for the production of milk. Furthermore, it is a grading ordinance, classifying the various supplies of any city into Grades A, B, C, or D, according to the degree of compliance with the minimum requirements for Grade A. Milk supplies which meet all the requirements, including cooling and bacteria count, are Grade A; supplies which fail to meet one or more of a few requirements of construction of minor importance, or in which the cooling and bacteria counts are not as good, are Grade B; supplies which fail to meet one or more requirements of greater sanitary significance are Grade C; and those which fail in the most important requirement of cleanliness of either equipment or methods are Grade D. Anyone accustomed to using Grade A milk at home can accept Grade A milk in any other Standard Ordinance city with the knowledge that the grade is based upon compliance with the same requirements of production.

It occasionally happens that a city experiences temporary shortage of milk, more often now with consumption of milk increasing than formerly. Such shortages are now taken care of by purchasing the surplus from a neighboring Standard Ordinance city, specifying the grade. Public, producers and officials are thus satisfied, since the imported milk tests meets their requirements, just as does that which is locally produced.

A further advantage of the grading system is the result it produces. Under non-grading ordinances, compliance with each requirement has generally been made arbitrary, with the penalty of prosecution and fine, or revocation of license to sell, for violation. The requirements of this type of ordinance are almost never

fully complied with. Prosecutions in court and fines antagonize the producer, and are resorted to as little as possible by the inspector. License revocation is too drastic for any but the most serious conditions, since it cuts off a considerable quantity of milk and entails a large financial loss to the producer. The result is that enforcement is lenient, compliance is slack, and condition fail to improve. Contrast this with a grading ordinance. The producer knows what requirements he must meet in order to sell his milk as Grade A. He is not required to produce Grade A, unless he wants to, but he must use bottle caps marked with his grade, be it B, C, or D. Experience has shown that the public demand is for Grade A, and the producer of the lower grades finds it difficult to dispose of his product. Generally he has to take a lower price for it, and since this is unprofitable, he gets his dairy into Grade A status as quickly as possible. The lower grades of milk are gradually reduced to the vanishing point, eventually disappearing from the market, and are used as "demotion" or "penalty grades" for those producers who relax the constant vigilance necessary to maintain a Grade A supply. Conditions are improved more rapidly and are better maintained under a grading ordinance, because of the definite incentive given the dairyman by the public demand for Grade A.

Finally, the wide adoption of uniform minimum standards has furnished a basis for evaluating the relative excellence of any city's milk supply, which if desired may be compared with the supply of any other city. This is a valuable advantage with several applications. Since milk sanitation in North Carolina is a matter of local responsibility, it would be possible for milk supplies to carry false grades through incorrect interpretation of the minimum

requirements and, without means of official check or "audit" by the State Board of Health, might never be remedied. Conditions would then vary from city to city, and the grades would no longer be based on uniform compliance. A copy of the dairy inspection form is shown as last paragraph in this article preceding the Public Health Service City Milk Supply Rating, listing the 25 requirements which must be complied with for Grade A. The average bacteria count, which must not exceed 50,000, is not shown on this sheet, since it is a laboratory determination. but it enters into the grade determination. These forms are used by the milk insepctors in making their routine inspections, and also by the State Board of Health in computing the condition of the city's milk supply as a whole-the City Milk Supply Rating. If all the requirements are complied with, the right hand column is clear; opposite each requirement not complied with is placed a cross mark. Only one mark is necessary to determine a lower grade than A, and what that grade will be is designated by the letter to the left of the cross mark. In making the City Milk Supply Rating, such a form is filled out for each dairy, together with the number of gallons of milk sold. The sum, of course, gives the number of gallons of milk sold in the city per day. Then the number of gallons of milk which comply with requirement No. 1 are determined, then No. 2, and so on, until we have the compliance by gallons of the entire supply with each requirement. Knowing the total number of gallons supplied, it is a simple matter to compute the percentage compliance of the entire supply with each and every item. From these figures the City Milk Supply Rating is determined. If all the dairies comply with all the requirements, the rating will be 100. This, however, is an ideal

closely approached but seldom attained. Since there are small dairies and large, it would be unfair to say that a violation on a small dairy had as much effect on the total supply as the same violation on a large one. For this reason, the rating is made on the "gallons sold" basis.

Suppose in some city all the dairwere labeling their product Grade A. We should expect to find from a survey that the rating would be very close to 100. There are, of course, temporary defects liable to occur on any dairy from time to time, which would be promptly remedied on notice from the inspector, were he making his routine rounds. and would not call for degrading. Rating Survey, however, records conditions as found at the time of inspection, and therefore the rating is rarely 100. Suppose, however, that in this same city with all dairies graded A, a number of defects are found, and the final rating is considerably lower than 100, this would indicate that the grading was incorrect on some of the dairies at least. and that degrading should be done. It is, therefore, evident that the more milk a city has which complies with every item required for Grade A, the higher will be its milk supply rating. Likewise, in a city where the grading is found to be correct, but there are several B, C, or D grade dairies, the city milk sanitation rating will be Consequently, the will improve as the public demand for Grade A milk increases, and the lower grades are eliminated from the market.

The surveys shown in the following tabulation were made by different specialists of the United States Public Health Service, in company with the State Board of Health. It is very important to remember that all these surveys were made in the period between July 1st and October 1st of each year and, consequent-

ly, the 1929 survey figures are now six months old. Since the survey, many conditions have been remedied, and most of the ratings if made today would be higher. This applies particularly to Concord, Salisbury, Fayetteville and Reidsville, where the survey came at a time of reorganization, with new inspectors taking hold, and before they had had sufficient time to effect marked changes. Under a new arrangement of the State Inspection personnel, we expect to be able to grade dairies and make City Milk Supply Ratings more frequently than the once a year heretofore. When made, such surveys will be published in this Bulletin.

The order of listing has been the subject of much question. Obviously, a large city with many dairies and a pasteurizing plant to supervise has



Why not try a swim in beautiful Lake Waccamaw down in Columbus county in connection with this summer's vacation?

a more difficcult problem to handle than a small city with but few dairies. It would seem that small city ratings should be higher than the large city ratings. However, the larger city with more money generally has a better organized department with full time inspectors. The smaller city, as a rule, generally can afford only a part time inspector, and occasionally he has other duties which limit his time for milk sanitation. It is, therefore, unwise to compare the rating of one city with another indiscriminately, and consider that the lower rating is a reflection on the inspector. That does not necessarily apply. The rating is the impersonal measurement of the condition of any city's milk supply, with no regard to those human factors which might explain the result, high or low. It is precisely the same as measuring any object supposed to be 36" long with a standard yard stick, and finding that it is actually 34" long. In our case our "object" is the City's Milk Supply, our yard stick the "standard

requirements." Excuses for failure to measure up to the standard are conditions which should be remedied. City authorities can take the detailed survey reports as "audits," see for themselves the weak spots, and apply the proper remedy. This is the legitimate use of the Rating figures. The stimulus of competition is desirable, but the differences should not be carried to the point of "hair splitting." Such comparisons would attach a fictitious accuracy to the ratings.

In general, the milk sanitation rating is an expression of the extent to which the public understands, appreciates, and demands the highest quality of milk. As an economic matter, the dairy industry will respond to the consumer's demand for the highest quality of milk, as represented by the highest grade. When all milk consumers demand Grade "A" milk, and Grade "A" only, city milk sanitation ratings generally may be expected to reach or closely approach 100.,

NORTH CAROLINA STATE BOARD OF HEALTH

Name					
	(Dairy)	(Manager)		(Owner)	
Location_		P,	O. Address.		
A dul	y authorized officer of the	City of			made an
inspection	this day of your dairy elow with a cross (x).				
Cows mill	king; Cows dry	. Total prod	uction (gals.)) Sc	ld as milk
(sweet ar	nd butter) (gals.)			Grade	Cross
	, (8	cows		if	mark
*T4 "AT				defec-	means
*Item No.					defect
(1)				C	()
		DAIRY BARN			
(2)	Lighting (3 sq. feet per Air space (500 cu. feet p	stanchion)_		B	(
(3)	Floor construction (concr	er stanchion)	imposylous s	B	()
(14)	Floor construction (concregraded)	ete of other	impervious n	nateriai;	()
(40)	Floor cleanliness (no acc	cumulations l	peyond one r	nilking) D	
(5)	walls and ceiling (pain	ted: whitewa	.shed: clean:	ceiling	
(6a)	tight if feedstuffs o Barnyard (graded; drain	ver)		B	{
(6b)	Barnyard (cleanliness)			n	()
(7)	Manure (no fly breeding)			C	
		MILK ROOM			
(8a)		ier unpervioi	is material;	graded	
(8b)	to drain	d		D	()
(00)	Walls and ceiling (painte cleaned)	d or other a	oproved finish	i, easily	, ,
(8c)	Lighting (ample)			D	()
(8d)	Screening (effective)			D	()
(8e)	miscenaneous	~		D	()
(9)	Cleanliness and flies (all	necessary fly	control met	hode) D	<u>`</u>

			Grade,	
			defec-	
*Tt	em No.		tive	
10		TOILET		
	(10)	Location, construction, and operation (N. C. Standard)	D	()
		WATER SUPPLY		
	(11)	Accessibility, adequacy, quality	D	()
		UTENSILS		
	(12)		ed	
		flush; narrow mouth pails)	C	()
	(13)	Cleaning (rinsing, scrubbing alkaline solution, rinsing)		
	(14)	Sterilization with steam (steam jet or steam chamber)		
	(15) (16)	Storage (no recontamination) Handling (no handling of surfaces to which milk is expose	4 D	}
	(10)	MILKING	u_D	()
	(17)	Udders and teats (clean; disinfected)	D	()
	(18)	Flanks (free from visible dirt)	D	()
	(19)	Hands (clean; disinfected. dry)	D	()
	(20)	Clothing (clean)	D	()
	(21)	Milk stools (clean)	D	()
	(22)	Immediate removal of milk to milk house (no straining barn	in	
			D	()
	(220)	COOLING AND STORAGE Within one hour to 50° F; temperature maintained	D	
	(23b)	Within one hour to 50° F, temperature maintained Within one hour to 51° to 60° F; or delivery to plant with	in	()
	(=0~)	2 hours	'''' C	()
		BOTTLING AND CAPPING		(
	(24)		ne	
	()	disinfected)	. C	()
		EMPLOYEES		
	(25)	Health certificates (once each year)	C	()
т				
	Jace			

^{*}The item numbers correspond to the item numbers for grade "A" milk in the ordinance, to which please refer.

NORTH CAROLINA CITY MILK SUPPLY RATINGS MADE BY THE U. S. PUBLIC HEALTH SERVICE

		0. 0.	. I CD.	1110 11	LILLI	I DELL	ICE			
				m	**			RAT	INGS	
Date of Surveys	Population	No. Dairles and Plants	Total Gals. Sold	Retail Raw, Gals.	Pasteurized, Gals.	% Pasteurized	Retall Raw	Raw to Plants	Plants	Enforcement
			1	Winsto	n-Saler	n				
1929 1928 1926	 84,000 82,292 70,656	183	4317 3793 3250	1817 1837 1609	$2500 \\ 1956 \\ 1641$	57.9% 52.0% 50.5%	95% 89% 75%	87% 79% 40%	94% 72% 63%	90%
				Cha	rlotte					
1929 1928 1926	 82,000 80,600 46,338	153	5300 4784 4047	3500 3249 2570	1800 1535 1477	33.9 % 32.0 % 36.5 %	90% 88% 71%	91% 87% 48%	78% 75% 46%	88%
				Durhan						
1929 1928 1926	48,000 43,900 42,258	53	2597 2406 1543	1274 1413 1458	1323 993 85	51.0% 41.0% 5.5%	87% 90% 96%	89% 83% 74%	85% 89% 92%	92%
				Green	nsboro				, -	
1929 1928 1 9 26	 45,000 48,700 43,525	52	2564 1915 2250	1814 1906 1604 High	750 1009 646	29.0% 35.0% 28.7%	95% 89% 94%	91% 78% 74%	88% 83% 79%	80%
1929	28,000	43	1663	926	737	44.0%	89%	89%	90%	700
1928 1926	25,000 14,302	40	1470 1210	781 532	689 678	47.0% 56.0%	89% 87% 86%	83% 78%	59% 47%	79%
	 				ington	,,,,	,0	, , ,	,0	
1929 1928	 38,400 40,000	40	1768 1718	968 908	800 810	45.0% 47.0%	88% 83%	91% 72%	88% 82%	

								RAT	INGS	
p)			Q	Gals.	Gals.					
Surveys			Sold			eq		Plants		
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Date of	Population	No. and	Total Gals.	Retall Raw,	Pasteurized,	% E	Retall Raw	Raw	Plants	Enforcement
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1929	14,250	34	705	240	465	66.0%	87%	84%	63%	67%
1928	13,063		544	369	175	32.0%	84%	80%	71%	
1926	5, 952		356	356 Henders	0	0.0	81%			
1929	8,000	30	634	484	150	23.6%	99.5%	97%	91%	94%
1928	7,500		648	648	0	0.0	92%			- / -
1926	3,720		584	479	105	18.0%	92%	75%	71%	
1929	11,000	21	528	Cond 328	200	38.0%	89%	99%	85%	59%
1928			371	213	158	42.0%	85%	68%	48%	00,0
1926	9,903		559	284	275	49.2%	50%	50%	27%	
1929	14,000	16	750	Salisi 730	oury 20	2.7%	78%	55%	64%	34%
1928		10	820	770	50	6.0%	78%		28%	04 /0
1926			746	746	0	0.0	61%			
1929	16,964	15	647	Rocky 647	Moun 0	t 0.0	80%			48%
1928		15	603	603	ő	0.0	90%			40 70
1926			525	_525	0	0.0	92%			
1929	15,000	15	549	Fayett 549		0.0	600%			2 A of.
1928	10,342	10	449	449	0	0.0	69% $92%$			34%
1926	8,877		466	466	0	0.0	78%			
1000	7 500	14	490	Hick		0.0	00.00			55 e/
1929 1928	7,500 $6,164$	$\frac{14}{12}$	438 416	$\frac{438}{416}$	0	$0.0 \\ 0.0$	89 % 84 %			77%
1926	5,076		333	333	ŏ	0.0	81%			
1000	2 500	10	-1-	Chape	l Hill	10.77	00 ~	00~	00~	04 -4
1929 1928	3,500 4,250	13 9	515 420	305 300	$\frac{210}{120}$	$40.7\% \\ 29.0\%$	89% 97%	98% 8 2 %	82% 76%	81%
1926	1,483	Ü	298	298	0	0.0	92%			
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1929 1928	16,400	$\frac{12}{12}$	491 403	$\begin{array}{c} 491 \\ 403 \end{array}$	0	$0.0 \\ 0.0$	$83\% \\ 84\%$			73%
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1929	12,000	12	389	389	0	0.0	90%			80%
1928	9,336	16	456	456 New 1	0 Bern	0.0	82%			
1929	14,211	11	400	350	50	12.5%	87%	85%	70%	82%
1928	13,988	13	569	419	150	26.0%	88%	61%	68%	,,,
1926	12,198		421	421 Lexin	gton.	0.0	73.5%			
1929		11	455	345	110	24.0%	83%	90%	66%	56%
1928	6.127	11	466	466	0	0.0	90%			-57,0
1926	5,254		307	307 States	0	0.0	73%			
1929	14,500	10	453	453	0 0	0.0	97%			92%
1928	10,533	15	505	505	0	0.0	85%			
1926	7,895		355	355	0	0.0	69%			
1929		10	462	Wils 342	son 120	26.0%	66%	63%	55%	55%
1928	13,802	15	540	540	0	0.0	78%			00 70
1926	10,612		427	427	0	0.0	72%			
1929	16,000	9	387	Golds 387	boro 0	0.0	69%			78%
1928	15.451	11	483	483	ő	0.0	83%			10 /0
1926	11,296		418	418	0	0.0	98%			

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					ú	aç.			RAT	INGS	
Date of Surveys				Sold	Gals.	Gals.	Po		ıtı		
lurv		ជ	S S		rw,	Pasteurized,	Pasteurized	MI	Plants		Enforcement
S Jo		Population	Dairies Plants	Total Gals.	Retail Raw,	uriz	ster	Retall Raw	5	700	cen
te		pul	7.2 HH	tal	tail	ste		tal	Raw	Plants	nfor
Da		Po	No.	To			%	R	E	PI	鱼
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1928		11,991 9,771	8	$\frac{434}{422}$	434 422	0	0.0	$71\% \\ 71\%$			
1926				L	eaksvill	e Tw	p.				25.0
1929 1928		20,000	8 8	427 447	$\frac{177}{97}$	250 350	58.5% 78.0%	$67\% \\ 49\%$	$\frac{74\%}{62\%}$	36% 58%	27%
		7.000	8	189	Washir 189		0.0	66%			43%
1929 1928		7,000 6,395	7	189	189	0	0.0	78%			40 /0
1926				148	148 Mount	0 Airy	0.0	82%			
1929		4,752	6	188	188	0	0.0	81% 70%			45%
1928 1926		5,478 5,227	7	$\frac{215}{172}$	$\frac{215}{172}$	0	0.0	66%			
1929		7,300	6	429	Green 429	ville 0	0.0	96%			95%
1928		7,108	7	571	571	0	0.0	82%			
1926		5,772		202	202 Reidsv	0 rille	0.0	95%			
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			_		Lend	oir					01.0
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1928		3,693	5	88	88	0	0.0	62%			10 /0
1926		2,958		81	81 Southern	0 Pine	0.0 es	39%			
1929 1928		1,500 903	5 5	132 138	132 138	0	0.0	88% 91%			93%
1926		743	J	112	112	0	0.0	89%			
1929		8,000	4	222	Thomas 222	sville 0	0.0	97%			95%
1928 1926		7,276 5,676	4	$\frac{220}{153}$	$\frac{220}{153}$	0	$0.0 \\ 0.0$	91% 78%			
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1929 1928		10,000 5,970	4 6	$\frac{162}{226}$	$\frac{162}{226}$	0	$0.0 \\ 0.0$	$\frac{91\%}{43\%}$			91%
		•		240	Ham 240		0.0	97%			86%
1929 1928		4,500 5,116	4 4	223	223	0	0.0	91%			00 70
1926		3,808		179	179 Ashel	0 oro	0.0	78%			
1929		4,500	4	145	145	0	0.0	89%			87%
1928		3,114	4	118	118 Oxfo	rd	0.0	76%			
1929 1928		3,500 4,076	4 6	111 130	$\frac{111}{130}$	0	$0.0 \\ 0.0$	85% 82%			96%
1926		3,606		105	105 Elk	0	0.0	75%			
1929		3,000	3	220	220	0	0.0	83%			55%
1928		1,373	3	187	187 Sanfo	0 ord	0.0	66%			
1929		4,500	2 3	175	175	0	0.0	100%			94%
1928 1926		3,530 2,977	3	156 136	$\begin{array}{c} 156 \\ 136 \end{array}$	0	$0.0 \\ 0.0$	$\frac{92\%}{80\%}$			

								RATI	NGS .	
Date of Surveys	Population	No. Dairies and Plants	Total Gals. Sold	Retail Raw, Gals.	Pasteurized, Gals.	% Pasteurized	Retail Raw	Raw to Plants	Plants	Enforcement
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1928	1,933 1,933	2 3	120	120	0	0.0	53%			00,0
1929 1928	4,970 5,081	$_{4}^{3}$	125 132	Tar b 0 0	125	100.0 100.0	****	73% 65%	57% 44%	16%
			IN	TIAL :	SURV	EYS				
1929	4,500	10	365	Alben 365 Cartl	0	0.0	73%			35%
1929	1,052	4	73	73	0	0.0	10%	term mine		
1929	3,018	2	103	Clin 103	ton 0	0.0	68%			38%
		For	syth	County		nersville	(e)			00 /0
1929	1,301	1	27	27	0	0.0	84%			
1929	1,500	4	110	Granite 110	rans 0	0.0	42%			
				Kanna						
1929	12,000	11	350	350	0	0.0	84%			
1929	2,501	4	61	Mount 61 New	0	0.0	51%			
1929	3,656	7	147	147	0	0.0	37%			
1929	10,000	16	327	She) 177	lb y 150	46.0%	41%	24%	33%	

MAY DAY PROGRAM IN HALIFAX

Near 400 club people in Halifax County witnessed a May Day Health Program in the Halifax School Building last Thursday morning May 1st, and visited five Better Homes, a vegetable garden, and a flower garden on exhibition in the afternoon.

The program consisted of four health plays: "Old Song Tableaux," presented by the Halifax Woman's Club, under the direction of Mrs. F. W. M. White; "The Teeth The Club Girl Built," by the Darlington Woman's Club, under the direction of Mesdames Ed Dickens and Emma Johnson; "The American Girl Beauty Products," by the Aurelian Springs Woman's Club, under the direction of Mrs. V. C. Matthews; and a "Health Fashion Show," by the Dawson Wo-

man's Club, under the direction of Mrs. J. L. Holliday and Miss Nannie Lewis. These Health Plays set forth every Health Rule in a most clever manner.

Health slides were shown on the screen. Dr. Z. P. Mitchell, Halifax County Health Officer, summarized the Health Principles involved in the program and urged the audience to cooperate with the Health Department in seeing that these laws are fully observed.

Slides were shown of the thirty Better Homes Demonstrations on exhibition for Better Homes Week—April 27-May 3, throughout the county. Every community gave a demonstration. Other Better Homes Slides were shown along with the county pictures. All the pictures were

shown by Mr. A. E. Akers, Superintendent.

The homes of Mrs. Quentin Gregory, Mrs. S. S. Norman, Mrs. Edwin Coppedge, Mrs. Ed Travis, Jr., and Mrs. J. W. Tillery, the garden of Mrs. Frank Musscleman, and the flower yard of Mrs. J. W. Tillery of Halifax were visited and much enjoyed. The demonstrations set forth many valuable suggestions for making homes more attractive, more convenient, more homelike, and a better place for the manufacturing of citizens.

DANGER!

R. W. HAYWOOD, JR.

Asst. Eng., Bureau of Sanitary Engineering

"A traffic death every seventeen minutes!" "Terrible!" you cry. But stop! That statement is incorrect, because traffic is not responsible for these eighty-four deaths each twenty-four hours. It is directly responsible for more than twice that number!

The rapid development of the automobile as a means of transportation within the past decade has brought to the forefront a problem that is not limited to the numbers of deaths caused by wrecks, overturned cars, hit-and-run drivers, or the like. Each tourist, camper, joy rider, or traveler of any kind is a potential menace to public health, and far more grave than any intoxicated, careless, or reckless driver.

A familiar sight to those traveling the highways, for which North Carolina is so justly praised, is the scores of "hot dog" stands and other eating places. A modern convenience that is necessitated by the incessant flow of traffic from point to point within and without the State is the filling station, and those advertising "rest rooms" are ever popular. A long, hot drive develops a thirst to be quenched with a glass of water, coming from some roadside well or spring, and carrying no one knows how many kinds of bacteria capable of causing diseases that time and again prove fatal.

These three sources menace public health to an extent little realized by

us of the every day world who take no time to stop and think of the dangers we encounter along the highways. True, we have a wonderful system of protection for ourselves when we are at home. Forever watching over us is the Board of Health with its numbers of trained and efficient men and women who are always at work making North Carolina a better and more healthy place to live. Hundreds of thousands of dollars are spent yearly by our municipalities to secure and maintain adequate and safe supplies of drinking water, to turn sewage from a nuisance and threat to public health into valuable fertilizing materials, to make sure that milk served on our tables. or used in our kitchens, is produced by healthy cows in clean dairies, to keep our cafes and hotels clean and sanitary so that we may eat and sleep away from home, knowing that the food placed before us is prepared with the greatest cleanliness and our beds are supplied with clean linen and furnished with inspected matresses, and to keep up a constant warfare in many other ways against disease and ill health. And yet, we ignorantly or wilfully, expose ourselves to more danger and take more chances on one trip in one day than we will come in contact with in a life time at home.

A drastic statement, say you? Not at all. Let us stop to think a minute. That wiener you bought back yonder that tasted so good. Where When was the did it come from? pan in which it was cooked last thoroughly cleaned? How much dust had settled on it to add to its flavor? In what physical condition was the man who prepared it? Did he have any infectious disease? Was he clean or did his hands look as tho' they'd never seen water? What? Of course you didn't think about all that. You were hungry. But does that make those dangers less grave?

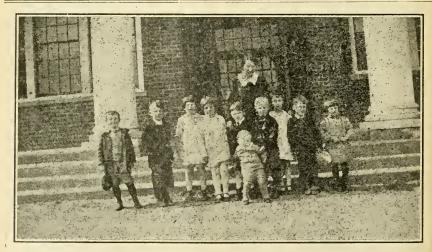
And that delicious drink of water from that "quaint old well," did you notice that the ground surrounding it drained toward the well, or stop to think that the water you spilled poured through the cracks in the platform cover back into the well to be drawn up and drunk by someone else? Did you notice that the pig pen was on the hill back of this well, or that the privy was just a little way up the hill to the left from that picturesque well? How disgusting, you say. And yet, how true.

"Oh, what a nice filling station! And a restroom! We must stop here!"

But who used that restroom before you did? Were they clean and healthy? Or were they filthy with some communicable disease? Where does this restroom sewage empty? Are you sure it isn't near a well where you must get a drink?

And that attractive tourist camp with such cunning litle cabins. you were just too tired to unfasten all your bedding that took so long to pack last night, and used that furnished so cheaply, do you know who used it last, or whether it has been laundered since then? Is it your idea of "roughing it" to keep slapping at those bothersome flies that persist in annoying you while you're eating breakfast the next morning? What caused so many? Perhaps it was that garbage heap or some insanitary privies when they've covered themselves in filth and carry millions of disease germs just ready to put them on your ham and eggs.

The presence of such places is necessitated by the vast stream of tourist traffic in and through the State. The dangers are seldom realized by



Here is a group of children who will enter Aycock school in Orange county this fall for the first time. They were examined on March 6th in a pre-school round-up. The little rebel down front says he is positively not going to school this year and wants to know why they are picking on him unless they are going to give him toxin-antitoxin, which he wants and needs.

the hundreds of travelers that are constantly passing over the highways and, of those that do, a great number are inclined to disregard the common sense precautions and to "rough it" or "live off the country."

As the number of tourists increases, so do the dangers. Traffic within the State is heaviest during the spring and summer months when vacationists throng the highways and Traffic through the State byways. going north is heaviest in the spring when those who have wintered in Florida and other southern resorts are returning home, and south bound increases as cold weather draws on. So it is easily seen that there is only a small period during the twelve months when there is the least let up in this tide, and at no time does it stop flowing entirely.

Not only is the health of the traveling public in danger, but those who stay at home are also exposed by the diseases brought back by these campers and tourists. To spend money for the prevention of diseases of typhoid, diphtheria, smallpox, and the like at home is to throw it away, if breeding places are allowed to dot the length and breadth of the State, furnishing an inexhaustible supply of bacteria with the most efficient means of transmission, the automobile and its occupants.

The realization of these dangers is no recent thing by those in authority. Numerous letters and editorials have been written bewailing their presence, and the State Board of Health has been severely criticized for allowing them to exist. Just recently a letter was received asking why the eating places did not come under the law governing hotels and restaurants.

The State agencies have done little to eradicate these conditions, because they have no power to act. The cafe and hotel law does not affect eating stands that accommodate less than twelve people, and it is easily seen how the chief offenders remain unaffected by this statute. Were there laws governing such establishments now in existence, there are no funds appropriated to provide sufficient personnel of the proper kind and with the proper training to undertake their enforcement.

Let it be said now, and emphasized, that to clean up the highways in the State of North Carolina is a task that can only be satisfactorily accomplished by the enactment of laws making sanitary conditions in all instances obligatory to anyone serving the public in any way, and in placing the responsibility for enforcement of these laws upon a department equipped with MEN COMPETENT TO DO SO-men WHO HAVE BEEN TRAINED specifically in this line of work. It will be a hopeless task to effect such a cleanup, even when laws are passed, by utilizing untrained men, or those who are already overburdened with other tasks.

Let us consider what has been done elsewhere to control this ever-increasing wave of danger. Already several states—Ohio, Maine, Pennsylvania, Minnesota, Wisconsin, and West Virginia have developed programs of roadside sanitation in attempts to cope with this problem. The systems adopted by Maine and Ohio are particularly complete and inclusive and, if properly enforced, should make highways equally as safe as the towns and cities they connect.

In Ohio supplies of drinking water along the roadside that furnish water at any time to the public are inspected by a representative of the State Health Department, or the district health officer, samples of the water analyzed for its bacterial content, the surroundings carefully gone over to make sure that there is no source of possible pollution near and, if justifiable, the "Seal of Safety" is awarded. In case the nature of the

well, pump, or whatever may be the type of supply, does not permit the awarding of this seal, suggestions are made whereby it may be attained by cleaning up and developing a safe supply. If, after a reasonable length of time, the proposed improvements are not made, the supply is ordered discontinued, the well filled, or pump dismantled.

The "Seals of Safety" are numbered and a careful record of each seal is kept so that a list of all certified supplies is available at all water The surroundings of these times. supplies are watched to prevent subsequent contamination and additional tests are run from time to time on the water to ascertain whether or not such contamination has taken place. Signs are erected along the highways advising the motorist of a supply of safe drinking water, guaranteed by the State of Ohio, is to be found just ahead.

Maine is equally as careful with her roadside water supplies and is concerned also with the eating places along her highways, being aided in this program by most comprehensive and conclusive laws and statutes. It is obligatory that every eating, drinking, or lodging place of any size be licensed once a year, and that such places shall be maintained in accordance with the rules and regulations set forth by the State Board of Health. Each employee must, upon application for a position, no matter how small the establishment, furnish a certificate from a reputable physician stating that he, or she, is free from any communicable disease and this certificate must be available for inspection at any time. Carriers of diseases such as typhoid fever, diphtheria, septic sore throat, and the like, may not serve as employees after the proprietor has been notified in writing that such a person is a carrier.

Pennsylvania, during the warm

weather months of 1929, had a force of over fifty workers patrolling her highways to enforce laws similar to those of Ohio and Maine, with particular attention being given to the "hot dog" and cold drink stands found scattered everywhere. This emphasis was due to the fact that a program to maintain safe roadside water supplies had previously been inaugurated and was functioning smoothly at that time.

All the states mentioned have realized the importance of summer camps in the life and health of its children, and the problem presented in providing adequate sanitary facilities for such camps. The tourist camps that are now found adjacent to the main arterial routes in profusion present another phase of this problem that has been adequately cared for.

All camps in these states must be licensed each year and licenses are issued only upon the recommendation of a sanitary inspector whose duty it is to thoroughly inspect the camp and its surroundings, paying attention to the water supply, garbage, and sewage disposal, and many other items vital in the maintenance of a safe and healthful camp. The laws governing public eating and drinking places are applicable here, as well as elsewhere, and must be adhered to.

So have other states gone about taking care of themselves and curing a necessary ill. Are we to lag behind? North Carolina ranks well to the front in all fields of sanitation save this alone, and, indeed, is serving as a model for some other states to be guided by in their development along these lines. As has been said, the State Board of Health is ready, willing, and anxious to act, if only given the authority and personnel to do so. Are we to stay behind and delay in protecting ourselves in the face of such a crying need for protection?

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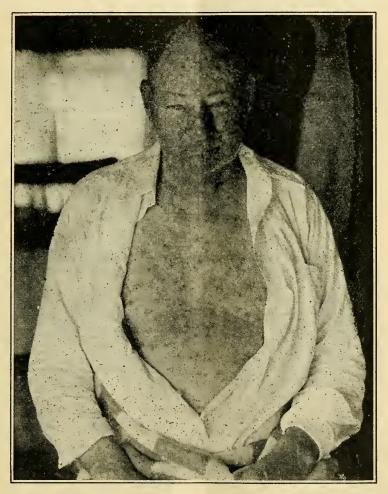
This Bulletin will be sent free to any citizen of the State upon request.

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VOL. XLV.

JULY, 1930

NO. 7



VACCINATION WOULD HAVE PREVENTED THIS

This man is a respected citizen of his community. He had simply failed to go to the trouble to get himself vaccinated. He is advising his friends now that one big way to prevent sure enough trouble sooner or later is to be vaccinated until it "takes."

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies Fly Placards

German Measles Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pellagra Public Health Laws Prenatal Care Sanitary Privies Scarlet Fever

Tuberculosis Tuberculosis Placards Typhoid Fever Typhoid Placards Venereal Diseases Water Supplies Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West) "Our Babies" Prenatal Letters (series of nine monthly letters) Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Babies Hints to North Carolina Mothers Who Want Better Babies Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).

Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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VOL. XLV.

JULY, 1930

NO. 7

ANNOUNCEMENT

Through the courtesy of the officials of the radio station WPTF, owned and operated by the Durham Life Insurance Company, at its home office in Raleigh, North Carolina, effective Saturday, June 14, the members of the executive staff of the State Board of Health will begin a series of broadcasting talks on public health subjects. The time allotted at present for these talks is the fifteen minute period from 1:30 to 1:45 p. m. every Saturday. Dr. Chas. O'H. Laughinghouse, Secretary of Board and State Health Officer, will inaugurate this series by a talk on Saturday, June 14. Different members of the staff will follow Dr. Laughinghouse in rotation from time to time. It is hoped that this enterprise will arouse sufficient interest for it to be made permanent.

The State Board of Health is grateful to the Durham Life Insurance Company officials for this opportunity to broadcast information on timely topics directed toward the prevention of the spread of preventable disease in North Carolina. We herewith solicit correspondence concerning these talks from interested listeners throughout the State. We would especially like to have requests from citizens for discussion of particular subjects which it might be advisable to discuss over the radio.

DISGRACE OF SMALLPOX STILL UPON US

We do not know how it is on other planets as we have not yet had experience with the manners and customs existing on any other planet except this one we call the earth. It apparently takes a large number of people on this earth a long time to learn much. Speaking offhand, we would say that it takes from a thousand to ten thousand years for some things to be learned by some people.

About one hundred and thirty years ago Edward Jenner in England demonstrated to the satisfaction of the scientists of that day that vaccination would protect against smallpox. When Jenner perfected this process, as practiced at that time, smallpox was one of the great scourges of the

earth. Some writers have gone so far as to claim that in some single years in the sixteenth and seventeenth century more than ten per cent of the total population of the earth died from smallpox. The disease was very virulent at that time as it has been since on frequent occasions. The mortality was very high. In many epidemics of the eighteenth century preceding Jenner's discovery the mortality was as high as fifty per cent; that is, half the people having the disease died.

During the last few years the process of preparing smallpox vaccine has been made practically perfect and almost free from any danger of contamination with any other disease

condition or infection when used on a person to prevent smallpox. Under the leadership of the United States Hygienic Laboratory at Washington standard measures have been perfected and adopted until today it is just as safe from the standpoint of infection to have vaccine virus injected into one's skin as it would be to have plain sterile water rubbed in. It has been proved during the past hundred years by its use on millions and millions of people that no one can suffer any unfavorable consequences following the vaccination against smallpox if even ordinary care is exercised.

Since the adoption of smallpox vaccination as a prevention of that scourge the mortality has been reduced to almost nothing; that is, very few people now dying of the disease when having it, although an occasional death occurs, and in some epidemics the disease is still virulent and causes the deaths of quite a number of people. However, speaking of the world at large, the universal use in all countries of smallpox vaccine has reduced the mortality to a very low figure. People now have very mild attacks as a rule compared to virulent attacks of former days. It is, however, the same disease it has always been-one of the most contagious in the world, one of the most filthy and loathsome diseases, and one in which the patient suffers untold agonies when the disease is contracted in anything like severe form. Any relaxation of the laws requiring vaccination or any suspicion of its use and its recommended use by physicians over the world would result in a few years time in the same terrible conditions returning that were present in the eighteenth century.

In spite of all the foregoing facts, in the full face of knowledge so simple that any child can understand as to what vaccination has done and what smallpox meant before vaccina-

tion was discovered, we find in this free and liberty-loving United States of America today more people having smallpox per thousand population than any country in the world except among the benighted population of tropical India; and we also find flourishing as never before anti-vaccination societies and organizations who flaunt in the face of the public the fact that they are in existence for the purpose of opposing this humanitarian and life and health saving measure spensored by scientists for more than a hundred years and proved as no other single scientific measure has ever been supported.

In order to remind our readers that smallpox is still present in North Carolina; that it is still the same kind



As this photograph indicates, it was not all flowers that bloomed last spring for this citizen of North Carolina. He was so anxious to warn his friends that he had his photograph published on some post cards to mail to them showing just what any unvaccinated person may expect any time.

of disease it has always been; that it is still dangerous to play with, we are publishing in this issue of the Bulletin two photographs of respected white men who have had the disease this year in one of the counties of North Carolina. We will ask our readers to look at these photographs and think of what it meant to these two fellow citizens, and then be vaccinated, unless it has been done within the past three years.

UNITED STATES CHAMBER OF COMMERCE HEALTH CONSERVATION CONTEST

The State Board of Health is in receipt of a letter from Dr. W. F. Walker, secretary of the Committee Administrative Practice of the American Public Health Association, notifying the Board that the cities of Greensboro and Durham have won honorable mention in the Conservation Health Contest inaugurated early in 1929 by the Chamber of Commerce of the United States. In this contest the American Public Health Association cooperated in every way with the commerce association in creating interest in this enterprise in the cities of the United States. In this contest held last year there were seven cities in North Carolina which entered the contest.

We are publishing in full below Dr. Walker's letter. We would like especially to call attention to the paragraph of his letter which reminds the health officers in the different cities and towns of this State that the contest is again being held this year. The object of this annual competition "is to assist in reducing economic losses in the United States due to unnecessary illness and death, by means of activities carried through the organization and thence the leadership of health committees of local chambers of commerce or similar associations, in cooperation with the official health agencies." All chambers of commerce, or similar associations which are organization members of the chamber of commerce of the United States, are eligible to enter this contest this year. Full details of the plan and the requirements for entry may be obtained by writing the Insurance Department, Chamber of Commerce of the United States, Washington, D. C.

The letter of Dr. Walker follows in full, in which he commends the cities of Greensboro and Durham for winning honorable mention.

"The cities of Greensboro and Durham have won Honorable Mention in Classes III and IV, respectively, of the Health Conservation Contest inaugurated by the Chamber of Commerce of the United States. On behalf of the Association and of the Committee on Administrative Practice I congratulate you, as the State Health Officer, for the schedules submitted are a manifestation of the high plane public health has reached in your state.

"To the American Public Health Association which must consider the nation as a whole, as well as its integral parts, the broadening of interests on the part of authoritative business organizations so as to include health and its economic value is particularly gratifying. With such enlightened cooperation the financial burden from preventable sickness and early death may be lowered not only locally, but soon will be reflected in the vital statistics of the nation.

"In addition to Greensboro and Durham, five other cities in North Carolina entered the Contest. They are: Burlington, Raleigh, Winston-Salem, Lexington and Statesville. The last two, however, did not submit schedules.

"I am attaching a copy of the Announcement and Fact-finding Schedule as you will no doubt want to look them over again with a view to interesting the Health Officers and Chambers of Commerce of the above cities and other North Carolina cities in the 1930 Contest."

ANOTHER SIDE TO THE TENANT FARMER PROBLEM

It is a well known fact that there are always in North Carolina two classes of tenant farmers. One class may be said to be the shiftless, thriftless, no account moving type that will not work, will not stick to a crop until it is harvested, if it is possible to avoid it, and who are constantly moving around, unable to make a living anywhere. This type, of course, should be pitied, and every effort should be made to help their children, because more frequently than not mental competence, through heredity and bad training, is lacking.

There is another class, however, of tenant farmers which comprises some of the best citizens in this state. In nearly every instance when a young couple of this class marries and sets up housekeeping, unless disease other misfortune overtakes them, it is not long before they are able, through their thrift and industry, to acquire a farm of their own. Many of the State's staunchest middle class citizens emerge from this class. It is natural to expect that from now on increasing numbers of people of this character will become landowners and independent farmers, making for a finer citizenship for the State. This may be expected on account of better educational facilities, better health advantages, and better economic opportunities.

As an illustration of some of the problems which this better class of tenant farmers has to meet, and also as an indication of the vision for bet-

ter conditions promised to them, we are herewith publishing a letter from an intelligent young wife and mother, received sometime ago from one of the eastern North Carolina counties. Read the letter and ponder it carefully.

"I am writing you in regard to what I term a serious problem. I will state the facts as brief and plain as I possibly can.

"I am a tenant farmer's wife, living on a farm owned and controlled by (Name of absentee landlord). There are five tenants, including us, living in a radius of one mile, three of whom are white, and respectable families, the other two are Negro families. There is no sign of a privy of any kind on our premises, let alone a sanitary one. This same landlord has been kindly asked to provide such for these white tenants, and to these requests replies in a careless manner. We have been living here since the first of the year. He is able not only to provide such but has plenty of old and new lumber to build them. also the tenants have offered to build them, although he has not given his consent.

"With the approach of summer, we think there could be some measure taken whereby we might induce him to build sanitary privies, or provide lumber and material so our men folks could build and thus safeguard our health and that of our children. Is there a way that you people could tell us how to begin to bring this about?"

DIABETES

By

FREDERICK R. TAYLOR, B. S., M. D.

Diabetes is a name that is applied to three different diseases: diabetes insipidus, renal diabetes, and diabetes mellitus or ordinary diabetes.

Diabetes insipidus is a rare condition due to a particular type of disease affecting a special part of the brain. Sugar is not found in the urine (hence the name "insipidus"), and the disease is rather a medical curiosity, of no practical importance to any large number of persons, so it will not be discussed further here.

Renal diabetes, or more properly, renal glycosuria, is a rather uncommon kidney condition due to the fact that the sugar normally present in the blood, "leaks" through the kidney, as it were, and appears in the urine, though there is no excess of sugar in the blood. It is practically harmless, but is of importance where it occurs because of the ease of confusing it with true diabetes mellitus. Where doubt or confusion exists, an examination of the blood, testing it for the amount of sugar it contains, will clear up the diagnosis.

Ordinary diabetes, i. e., true diabetes mellitus, is not a kidney disease at all, despite much public belief to the contrary, but a disease of the pancreas. Dr. Joslin of Boston estimates that there are about one million persons affected with this disease in the United States alone, so it is important that every intelligent person should have some general knowledge of it. Hereafter, in this article, wherever the term "diabetes" is used it will refer to the ordinary diabetes mellitus, unless otherwise stated. The term "diabetes" comes from the Greek and means literally a syphon. It is applied to the disease because advanced cases show great thirst, drink immense quantities of water, and void equally immense quantities of urine. "Mellitus" means literally "honeyed," or, more freely translated, "sweet," or "sugar bearing," and refers to the sugar content of the urine. "Glycosuria" means having glucose in the urine, and occurs in true diabetes mellitus, in renal diabetes, and in certain other conditions where it is of little or no practical importance—e. g. it is said to be produced in hydrophobia.

The pancreas is a vital organ located in the upper abdomen behind the stomach. It has a double function: it supplies the most powerful digestive juice in the body, known as the pancreatic juice, which it pours into the intestine through special ducts developed for the purpose; and it makes another substance, which we call insulin, which goes directly into the blood, which is essential for the utilization of sugar in the body. Only certain special cells of the pancreas prepare this insulin. Under the microscope they can be seen grouped in little "islands" in the pancreatic tissue. The Latin word for "island" is "insula," hence the secretion of these "islands of Langerhans," as they are known after their discoverer, is called "insulin."

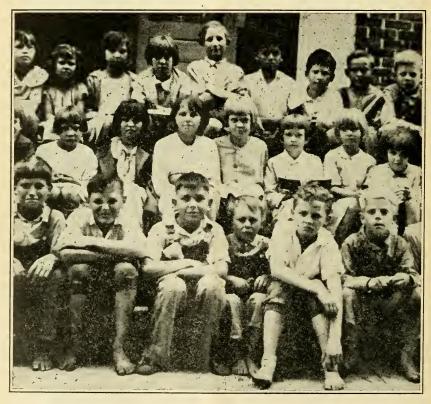
Diabetes mellitus may be defined as a disease of the pancreas in which there is deficient production of insulin.

Sugar is essential to life. That does not mean that we have to eat sugar to live, for starch of all forms is broken down in the process of digestion with the formation of sugar. Some sugars are very complex, but these are broken down until glucose, one of the simplest sugars known, is formed, and practically all sugar that is utilized in the body is utilized as glucose. Without insulin, however, glucose cannot be utilized.

Normally the blood of a fasting person should contain from 0.09 to 0.12% glucose. After a meal, especially if sugar or starchy foods are eaten, the amount will be somewhat greater. However, unless an enormous amount of sugar is eaten, the glucose content of the blood of a normal person never gets very high, for if a

moderate excess be present, it is quickly disposed of with the help of insulin, in one of two ways-transformed, into heat or other energy, or stored in the body as glycogen, or as fat. If. however, the supply of insulin is deficient, glucose tends to accumulate in the blood. If the kidneys are normal, when the blood glucose, or blood sugar, as it is usually called. reaches a concentration of about 0.16%, sugar begins to appear in the urine, and the more there is in the blood, the more there will be in the urine.

UNDERWEIGHT GROUP OF SOUTHPORT SCHOOL CHILDREN



Miss Parsons, Brunswick County Public Health Nurse, sends us this picture of a group of 32 children in the Southport Schools who were provided with milk regularly each day for three months. The milk was donated by the Woman's Club of Southport from money secured from the sale of Christmas Seals. At the beginning of the period all the children were underweight. After three months the gain in weight was considerable.

We do not know the cause of this deficiency in insulin formation. We do know, however, that fat people tend to develop it much oftener than persons of normal weight, and those who have a diabetic tendency are made much worse by a diet containing an excess of sugars and starches.

Inability to utilize sugar often causes difficulty in utilizing fatty foods in the body. If fats are not properly used, dangerous acid poisons called "ketone bodies" may be formed in the blood, and these substances may cause unconsciousness and death—indeed they are responsible for most deaths from diabetes. A person suffering from such acid poisoning is said to have a "ketosis," or "diabetic acidosis." When this is severe enough to produce unconsciousness, the patient is said to suffer from "diabetic coma," a very dangerous condition.

Diabetes can kill in other ways than by causing coma, however. When there is an excess of sugar in the blood, many disease germs grow more luxuriantly than they do in normal bodies-the sugar laden tissues supply them with rich food. This is espccially true of the ordinary pusforming organisms—a tiny pustule in a diabetic may spread and develop a carbuncle or abscess. Slight abrasions about the toes from ill-fitting shoes, ingrowing nails, etc. are peculiarly liable to result in a fatal blood-poisoning. A severe diabetic is also peculiarly liable to develop gangrene of the toes or feet.

The Symptoms of Diabetes

At its onset diabetes does not usually cause any characteristic symptoms that can be felt by its victims. Many a case of diabetes is discovered in its early stages merely in the course of a routine medical examination—e. g. sugar is found in the urine during an examination for life insurance, or in the course of a periodic health examination, in a person who

believes himself quite healthy. again, it is often discovered when the urine is examined as a routine procedure during the medical examination of a patient who is sick with some other condition, such as an attack of tonsillitis or influenza that happens to be coincidentally associated with the diabetes. Such attacks very often start up a case of diabetes in a person with a tendency to the disease, or make a preexisting diabetes much worse. Even in mild cases of diabetes, however, while the patients feel no characteristic symptoms that point to the disease, many of them recognize that they feel a little below par when sugar is in the urine.

Advanced cases of diabetes have highly characteristic symptoms. The very high content of sugar in the blood produces an intense thirst. presumably as an effort of Nature to dilute the blood with water and so lower the sugar concentration. drinks increasingly patient amounts of water-perhaps three or four times the ordinary amount for him, or even more. As the water that goes into the body has to come out again, he voids proportionately large amounts of urine. If the disease progresses unchecked, urine contains more and more sugar, and becomes irritating, and severe itching of the genitals, may be noted. The body tissues in general, too, being loaded with sugar from the blood, often are irritated, and generalized itching of the whole body, may occur and be not only very distressing, but dangerous, for it causes scratching with resultant abrasions of the skin that may develop into fatal infections.

In advanced diabetes there may be almost complete inability on the part of the body to utilize sugar and starch, so that the patient gets no benefit whatever from the sugars and starches he eats—they all pass out of

the body unused, as sugar in the urine. It is astonishing how much sugar may be lost from the body in twenty-four hours in an advanced diabetic. Yet if we recall that all starches are broken down with the formation of sugar, so that sugar is formed from our bread, potatoes, cereals, macaroni, etc., as well as from the sweets we eat and from milk sugar, it will not seem quite so strange to be told that a severe case of diabetes may eliminate in twenty-four hours time the equivalent of one hundred lumps of sugar or more. This, however, means foods wasted. The patient ate it, but really didn't get it after all! Therefore the severe diabetic is often starving in the midst of plenty-he doesn't get what he eats, and this causes another great symptom of advanced diabetes-inordinate appetite.

While the fat person is peculiarly likely to develop diabetes, the advanced diabetic is often underweight because of his inability to utilize a large proportion of the food he eats.

Another symptom, and an ominous one, in advanced diabetes is abnormal drowsiness. This is often due to acid poisoning, and when it is, the patient is threatened with coma. Vigorous treatment is essential in such cases.

Extreme susceptibility to boils often occurs without diabetes, but it is so frequent in advanced diabetes that the urine should be examined in all such cases.

Certain disturbances of vision, including cataract, are not infrequent in advanced diabetes.

Impotence also has often been noted.

Other symptoms occur which are not characteristic.

It cannot be too strongly insisted upon, however, that the so-called "characteristic symptoms" of diabetes rarely occur until the disease



A baby, like a kitten, will often crawl up on the running board of a car standing still and fall asleep in the warm sunshine. In such cases, when the driver hurriedly enters the car from the opposite side and drives off without looking, the newspapers and the death certificate often tell the story of another "unavoidable accident."

has progressed to an advanced and serious stage. The diagnosis should be made from the laboratory findings before symptoms occur. These findings consist of two or three things:

(a) the finding of sugar in the urine,
(b) the finding of an excess of sugar in the blood, and (c) in severe cases the finding of ketone bodies in the urine.

In a very mild case, sugar may appear in the urine only after the patient has eaten unusually freely of carbohydrate foods (sugars and starches). A slight excess of blood sugar may be detected when no sugar can be found in the urine. The appearance of ketone bodies in the urine is an urgent danger signal, and the patient should go to bed and place himself under the close watch of a physician, and follow his directions implicitly.

The diagnosis of the existence and severity of a case of diabetes, therefore, must depend on a well-trained physician. Other things being equal, the earlier the diagnosis, the more successful the treatment. There being no early symptoms, the widespread development of the custom of annual health examinations, offers the

best method at our command today for the early detection and adequate control of diabetes.

The Treatment of Diabetes

Nearly twenty years ago, Dr. Alfred Stengel, Professor of Medicine in the University of Pennsylvania, remarked that he knew of no better way to distinguish a well-educated physician from a poorly educated one than to watch the way he treated diabetes. That was of course before the days of insulin treatment, but the advent of that remarkable preparation has in no wise changed the truth of Dr. Stengel's statement. The physician who properly manages diabetes must be a real student of medicine. The treatment consists of a properly arranged diet in all cases—a diet low in sugars and starches, yet sufficient to keep up bodily strength. Insulin must be used in severe cases, and is indispensable in certain diabetic emergencies, notably coma. In addition special care must be taken of the skin and feet, and small abrasions, ingrowing toenails, little pustules, etc., treated energetically to try to prevent serious complications. The diabetic should also be especially careful to avoid so far as possible, all kinds of other infections, such as colds, influenza, etc., as they quently change a mild diabetes into a severe one. or a severe one into a fatal one.

As a carefully arranged diet is essential in all cases, the diabetic must put himself under the care of a competent physician who is a student of diabetes, and follow his directions, but this is not all. Dr. Elliott P. Joslin, one of the greatest authorities in the world on diabetes, writes, "— the patients who know the most, conditions being equal, can live the longest. There is no disease in which an understanding by the patient of the methods of treatment avails as much. Brains count. But knowledge alone

will not save the diabetic. This is a disease which tests the character of the patient, and for success in withstanding it, in addition to wisdom, he must possess honesty, self-control, and courage. These qualities are as essential with as without Many of my patients have actually lived longer than would have been expected of them had they been normal healthy people, and far longer than their similar fat friends whose obesity led to their death by way of the heart or kidneys. For the diabetic this is a demonstration and a challenge."

The above is quoted from the third edition of "A Diabetic Manual for the Mutual Use of Doctor and Patient," by Elliott P. Joslin, M. D., published by Lea and Febiger, Philadelphia. It is an excellent book for the diabetic to study. One of the most frequent prescriptions which the author of this article writes for his diabetic patients is filled at the bookstore rather than the drugstore, and is for this invaluable little book. Drugs, other than insulin for severe cases. have very little place in the treatment of diabetes. Insulin must be given hypodermically-if taken by mouth it is destroyed by the digestive juices. Researches are going on to try to develop a satisfactory substitute for insulin that can be taken by mouth, but as yet success has not been achieved. However, insulin is an almost miraculous life-saver in many severe cases of diabetes, though it cannot save all cases. It is a great boon to many who would otherwise be constantly threatened with death, and has added years of active useful comfortable life to thousands would otherwise be hopeless invalids tottering on the brink of the grave. No wonder Drs. Banting and Best, the discoverers of it, were given the Noble Prize in Medicine! It is one of the greatest discoveries of the century. However, this discovery does not do away with the absolute necessity for a properly restricted diet. The skilled physician will direct his patient's diet but the patient must learn how to apply his dietary instructions, and apply them. In other words, to boil down the quotation from Joslin given above, he must first know what to do, and then do it. Here is where character comes in. If he kicks over the traces and refuses to stick to his diet, he cannot expect to hold his disease in check. Advice of the most expert sort is useless if it is not followed. I recall an interesting anecdote illustrating this point told by Dr. William H. Smith of Boston in one of his postgraduate clinics in the Massachusetts General Hospital. The story ran something like this:

"A wealthy society woman once came into my office, and a prelimi-

nary examination showed that she would require a careful regulation of her diet. Before going to too much trouble in working out details, it is sometimes a good idea to see whether your patient will benefit by work or not, so I remarked to the woman, 'Madam, do you like food?' She replied, 'Oh, I just love good food, Dr. Smith.' Then I said, 'Madam, do you have a good cook?' She answered, 'Oh, Dr. Smith, I have the best cook in Boston.' I saw how things were, so I sorrowfully remarked, 'Madam, I can do nothing for you. Good-day'."

This does not mean that the diabetic cannot eat good food—he can and should, but he will have to limit his diet to a greater or less extent according to the severity of his disease. If he has not the character to do this, and lives to eat instead of eating to live, nothing can save him.



Look at this picture and then if you feel that you are going to be ill soon, hurry to Currituck. This is the Moyock class in home nursing. They range in age from seventeen to seventy and they all know their stuff.

BUTTER VS. BUTTER SUBSTITUTES

Our present knowledge of nutrition and nutritional diseases is full of information concerning the effects of vitmains on growth and in the prevention of diseases of dietary deficiency. Of particular interest is the effect of Vitamin A, the growth promoting vitamin, on growth and nutrition and that its absence in the diet causes a pathological condition of the eyes known as xerophthalmia, which if neglected will lead to blindness.

Vitamin A is associated with certain fats, and is especially abundant in milk, butter, egg yolk, the fat of glandular organs, and also in the leaves of plants. The seeds of plants contain less and it is practically absent from lard and the fats and oils of vegetable origin.

In the American and European diet the fats of milk are the most important source of Vitamin A. Since this is true it can easily be seen the important place that butter holds in the diet. In the investigation of xerophthalmia of dietary origin in rats and in children, cures were effected by



Columbus County, as may be noted in this picture, now has the honey as well as the strawberries. When they get their per capita milk production up to the Iowa level, the Editor of The Bulletin will expect an invitation to accompany Dr. Kimrey down there to a banquet. Kimrey to do the speaking and the Editor to help Senator Joe Brown and Dr. Johnson eat.

the administration of Vitamin A as butter.

The cheapness of vegetable margarine finds the consumption of this substitute for butter increasing constantly. The use of this substitute is not without danger unless the diet contains a satisfactory amount whole milk, leafy vegetables or cod liver oil, since vegetable margarine is almost devoid of Vitamin A. close an association between the substitution of margarine for butter and the prevalence of xerophthalmia is found by investigators in the case of Denmark, which country is a large exporter of butter. It has been found that the consumption of milk fat in Denmark before the War and to the end of 1916 steadily declined reached very low levels in the last year. At the same time the number of cases of xerophthalmia reached their maximum. Then came a complete change. In 1917 and 1918, and partly also during 1919, the exportation of butter was forbidden. More milk fat was consumed in the country than in the years before the War. Xerophthalmia disappeared almost completely, but reappeared in 1920 when the export of butter again began. The population finds in margarine a substitute for butter. A few years ago margarine was prepared from animal fats which contained a little Vitamin A. However, during recent years there has been an increasing use of vegetable margarine since this is cheaper, but the Vitamin A content of this is practically nil.

In the feeding of children especially, the above should be borne in mind, and in orphanages, boarding schools, and similar institutions unless it is possible to provide a diet rich in Vitamin A there should be no substitute used for butter.—Mississippi State Board of Health.

THE COUNTY'S MEDICAL BILL

Figures indicating that Forsyth County's medical bill for one year amounts to \$3,360,000, or an average of \$140 per family, are important particularly because of their bearing on the project of preventive medicine. Nearly half of this sum is paid out in doctors' bills. Hospital service, operations, nurses' attendance and medicines consume most of the rest of the bill.

Any doctor will readily agree that most of the illness which he is called to remedy could have been prevented if the patients would have consulted him in time to correct conditions that ultimately resulted in disease.

Any doctor knows that he would

be better off financially practicing preventive medicine than trying to combat disease once it had obtained a foothold. People kept well are in much better position to pay than people depleted by sickness.

A medical bill of more than three million dollars for Forsyth County is an imposing item. But the cost of sickness in terms of lost time, impaired earning capacity, loss of time to relatives and other factors is probably much greater than the medical bill. Preventive medicine is making progress. People are coming to know that the best time to see the doctor is in health and not in sickness, for maintained health keeps sickness away.—Winston-Salem Journal.

ORAL HYIENE

Every parent in Tarboro and this township should have heard the able and educational address last night by Dr. Branch of the State Department of Health at the Monday evening session of the Parent-Teachers Association, Dr. Branch is a dentist and he knows whereof he speaks. In his talk he stressed the great importance of the care of the teeth of children in our public schools. Not only did he tell of the many children who were suffering from the effects of bad teeth and diseased gums, but he told how these troubles could be remedied and after all his remedy was a most simple one that could be taken advantage of by all parents with a small cost.

One thing that struck us was that in many cases the child was sick and no one seemed to know the reason. He spoke of one child, a girl, who had been in the first grade for four years, at a great cost to the taxpayers of the county where she lived. An examination of the teeth and mouth disclosed that she had been intoxicated by pus flowing from her gums into her stomach, causing a sluggishness in mind and body. But he did not stop here, for, said he, after this girl had received treatment she went ahead with her studies and was thereafter one of the brightest pupils in her class.

Dr. Branch did not deal as much in theory as he did in actual facts and figures and this he did with slides, showing the actual conditions found in many cases. He called upon people of the county to continue these dental clinics from year to year, stating that if the county people would raise the sum of \$900 the state would furnish each year a term of another four weeks free of charge to the taxpayers.—Tarboro Southerner.

MILK DIETS FAVOR LONG LIVES

Most of the persons who have lived to be more than one hundred years of age seem to have subsisted largely on milk and dairy products, according to Dr. James A. Tobey, writing on "Some Famous Centenarians" in the Scientific American for April 1930. Dr. Tobey mentions numerous instances of real centenarians, among them Marie Priou, who died in 1838 at the reputed age of 158, after living for most of her life on goat's milk and cheese. Nicole Marco reached the age of 110 on a diet of bread and milk and the same fare helped Ephraim Pratt of Massachusetts to live to be 100. As in many other instances, Mr. Pratt's age was claimed to be much greater than that, and Dr. Tobey points out that many instances of alleged great ages have been found on investigation to be unwarranted. There have been numerous real centenarians, but only a few have attained to many years beyond the century mark.

That a milk diet can actually contribute to longevity has been shown by scientific experiments on animals, according to Dr. Tobey, who cites investigations by Professor Henry C. Sherman of Columbia University in New York. After ten years of studies on more than 400 white rats, Professor Sherman found that by doubling the proportion of milk in a diet comprised originally of one sixth whole milk powder and five sixths whole wheat powder, a gain of exactly ten percent in the span of life resulted. This indicates, according to Dr. Tobey, that six years might be added to the span of human life in this country by means of optimum nutrition, with milk playing a leading part.

LETTER TO PARENTS OF BABIES SIX MONTHS OLD

Doctor C. C. Hudson, health officer of Greensboro, has adopted the following plan, effective in the city of Greensboro when every baby born in that town reaches the age of six months. The plan, as will be noted, is to send a letter to the parents suggesting that they have their family physician give the baby toxin-antitoxin within the following sixty days in order to protect it against diphtheria, also urging them to have their physician vaccinate the baby against smallpox before it is three years old, and also advising typhoid vaccine before the child is four years old. It is an interesting letter, and it is a plan which could be adopted satisfaction by all other health departments not already carrying out some such arrangement.

"Dear Father and Mother:

"Your baby is six months old.

"Have your family physician give your baby three doses of toxin-antitoxin to protect it against diphtheria before it is eight months old.

"Have your physician vaccinate your baby for smallpox before it is three years old.

"Have your physician give your child typhoid vaccine before it is four years old.

"Measles is Preventable. Call your physician as soon as your child is exposed to measles.

"Whooping cough is dangerous, especially for children under three years of age. Call a physician at once if your baby shows any symptoms of whooping cough, or is exposed to it.

"Have your physician give your child a thorough physical examination

during its fourth year. Have him correct all physical defects which he may find at this examination.

"Your Child is your most valuable possession. You should care for it as such."

THE PUBLIC HEALTH LABORATORY AS AN ASSET

By

C. C. Hudson, Health Officer, Greensboro, N. C.

The public health laboratory has long been recognized as one of the most valuable parts of the public health program. If a health department is to control communicable diseases, it is necessary that it know where danger lurks. The information furnished by the laboratory is of much assistance in finding out these dangers. It gives information as to the condition of the water supply, milk supply, ice cream and certain other foods, and is of great importance in detecting communicable disease carriers. To the physician it is invaluable in assisting in the diagnosis of certain infections which are dangerous to the public. The work of the public health laboratory is made up of certain definite divisions:

First, Research Work—Most of our laboratories in smaller cities and towns do not have sufficient funds for carrying on research work, but in some of our larger cities this phase of the work is proving of enormous benefit to the public in general. The work of the New York City health laboratory is an outstanding example of research work in a public health organization.

A second function of the public health laboratory is the production of vaccines and serums for use by physicians in the treatment and control of various diseases. Our own State laboratory is an excellent example of the good that may come from having such an organization. Even though our State laboratory did not

prepare a single dose of vaccine it would be worth the cost of the entire laboratory just to have our manufacturers know that we have such a laboratory which could do so from the standpoint of the decreased cost of such materials to the public.

The third function of the public health laboratory is that concerned with routine examinations which are made for physicians and for health department. The work of the health department consists mainly in such examinations as testing milk for bacteria and butter fat, solids-not fat, examination of milk for dirt and other pollution; examination of water samples from wells or the public supply for pollution; examination specimens of ice, ice cream and other foods; and certain specimens of various kinds which may be submitted for diagnosis by physicians and the examination of cultures for release of cases from quarantine. As an example of the work of a public health laboratory, during the last year our own laboratory made the following examinations: Wassermann tests, 5,-Diphtheria examinations for diagnosis and release, 1,775; sputum examinations for tuberculosis, 74; examinations for gonorrhea, 462; Widal tests for typhoid, 302; blood cultures for typhoid, 26; blood counts, 93; Malaria, 125; intestinal parasites, 53; other diagnostic examinations, 1,187; water examinations, 118; examinations of milk, 922, total 10,825. Even at a low estimate, the value of this work was almost equivalent to

the cost of conducting our entire public health program.

The public health laboratory to be of most assistance to physicians must be so located as to be readily accessible to them from the standpoint of getting specimens to the laboratory in good condition and securing prompt reports.

public health laboratory While work, like all laboratory work, is exceedingly valuable, there are certain things about this work which we There are various must remember. sources of trouble in connection with laboratory work. Let us take diphtheria for example. At times a physician will depend for treatment upon the results of a diphtheria culture which he has submitted to a laboratory. There are various sources of trouble in connection with diphtheria cultures. The mop used in taking the culture may not have been rubbed over the membrane sufficiently to get the diphtheria germs on it so that they will be transferred to the culture media. Occasionally the will not be rubbed on the culture media sufficiently to inoculate it. If the culture has been allowed to dry out for several hours the diphtheria germs may die. We have long ago decided that where a case is possibly diphtheria it is best to give diphtheria antitoxin and then take a culture to find out whether or not the disease is diphtheria. If one culture is negative, a second should be taken. No one should depend upon a culture for a diagnosis of laryngeal diphtheria, as many of these cultures will be negative.

In the diagnosis of typhoid fever we have many difficulties, but with a blood culture for the early cases, a Widal test for the late cases and both in most instances, and also with a white cell count, we can usually arrive at a fairly satisfactory diagnosis. The Widal test, however, must be carefully watched and unless a fresh culture is used a partial agglutination may be secured where there is no typhoid.

The Wassermann test, as a diagnostic measure for syphilis, is source of considerable trouble. taking the specimen we find that occasionally physicians use tubes which have not been properly cleaned with distilled water and then sterilized. If the blood is not immediately put on ice it may haemolyze in spite of having used a sterile syringe and sterile tubes. It is necessary that the blood be centrifuged and the serum withdrawn at a very early date if hemolysis does not take place in warm weather. While a Wassermann test is perhaps the best laboratory test we have for the diagnosis of syphilis, we cannot consider it an absolutely positive test for the diagnosis syphilis or as a means of ruling out that disease. Drs. Mary C. McIntyre and Robert L. Gilmer, of Philadelphia, have compiled the results from 1394 serums from cases of proved syphilis, as reported in the Journal of the American Medical Association, August 23, 1929, using two teststhe Kolmer test and the Kahn test. They were only able to secure a positive test of 62.4% with the Kolmer test and 53.3% with the Kahn test. There was very little variation in the percentage of positives in the types of syphilis examined with the exception of visceral syphilis, which showed 100% positive. Recently a series of examinations of the same bloods were conducted by different physicians under the auspices of the Health Section of the League of Nations. The blood was taken from persons who were proved to have syphilis and persons who did not have the disease. In a number of instances positive examinations were secured from persons apparently free from who were syphilis. At times we secure Wassermann tests which do not agree with our physical findings. In such cases it is best to recheck the test, and if there is any doubt to give provocative doses of Neo and then retest.

In taking a specimen of blood for examination for malaria it is always well to find out about when the patient expects a chill and take the specimen an hour or two before the chill is expected.

It is always well in taking a specimen for examination of gonococci in females to secure this specimen directly from the urethra. Smears taken from other locations are usually so overgrown by other organisms that it is impossible to find the gonocccis excepting in the very early

stages of the disease. If a small cotton mop is made on an applicator and this inserted directly into the urethra the examination is more reliable.

In conclusion I would suggest that the public health laboratory is enormous value to the local physician and to the public health work in any community but, like all laboratory work, we must remember that it has certain weaknesses and that it is frequently necessary for us to check results which we have obtained when these results do not seem to be in accord with our clinical observations, and also that we should always treat cases suspected of being diphtheria as such until we are certain that this disease is not present.

PHYSICIAN TALKS ON FIRST AID METHODS TO THE YOUNG MOTHERS' CLUB OF CRAFTON

By
Sudie E. Pyatt

This is the two-column, front page headline the Crafton Herald gave its reporter's account of the third Health Meeting of the Young Mothers' Club of Crafton.

Here is the complete account of the meeting as the reporter wrote it for the Crafton Herald:

Ten, wide-awake, earnest young women, mothers of future citizens of Crafton, and members of the Young Mothers' Club, met at the home of Mrs. William Batchelor, secretary of the club, at 114 Spruce Street, yesterday afternoon and listened to a most interesting, informative discussion by Dr. Morton Wright on "First Aid in the Home."

"In household remedies be sure you have only high grade remedies, carefully labeled and kept in a medicine cabinet, that are real household aids that may be given by any member of the family in an emergency, and not

a useless collection of bottles filled with patent medicines, and medicines left over from doctors' prescriptions used in treating former illnesses," Dr. Wright began his talk.

"The quality of the first aid remedies you have in your home, your knowledge of how to use them, and the immediate calling of your physician, and if he is not available the best doctor nearest your home, will many times save the lives of those you love, and much suffering and pain.

"Many women of the 'home-doctor' type think it necessary to keep on hand an odd collection of all kinds of medicines, the properties and uses of which they know practically nothing," the doctor continued. "The things that are really necessary for a well-equipped first aid cabinet in the home are comparatively few, simple to use and not expensive. There are only four-teen articles that are necessary at all

times in the home medicine cabinet.

"A clinical thermometer for taking temperature, is an indispensable part of the equipment of the home medicine cabinet, and one which many women, even with small children, senselessly neglect to provide. In all cases of illness it is necessary to know whether there is any fever present or not. The clinical thermometer is the only tool we have for determining the presence or absence of fever, so you see why I mentioned a clinical thermometer first in my list of necessities for the home medicine cabinet.

"First aid dressings for the medicine cabinet include sterilized gauze for wound dressings, gauze bandages used to hold dressings in place, a roll of adhesive plaster, and a number of individual first aid dressings, will take care of emergency dressings for wounds.

"Six ounces or more of rubbing alcohol, used externally to relieve pains of sprains, strains, bruises, and to refresh the skin during illness, is necessary for the medicine cabinet.

"Aromatic spirits of ammonia, about two ounces, used one-half teaspoonful in water for faintness, is useful.

"A good eye wash is one and onehalf teaspoonfuls of boracic acid dissolved in a glass of hot water. Keep about four cunces in the medicine cabinet.

"One tube of sterilized carbolated vaseline for external use in the treatment of slight burns will save much unnecessary suffering from pains of burns.

"Tincture of iodine, three and onehalf per cent solution for wounds, is indispensable. Keep on hand a bottle of syrup of epicac to cause vomiting, especially in cases of poison. The ipecac is taken according to directions written on the bottle label.

"In the case of these simple rem-

edies it is well to remember the dosage in each case, and to place on the bottle a plain label on which the name of the contents of the bottle is written and typed, together with instructions for its use.

The doctor should be called immediately, Dr. Wright said, in the case of any serious accident, when a person is unconscious, or suffering from convulsions, severe pain in head or abdomen, especially after an injury, severe sore throat, which may be diphtheria, and a rash with fever. The rash with fever, he said, might be some contagious disease.

Headache, earache, nosebleed, toothache, colds, upset stomach, diarrhea, constipation, heartburn and dysmenorrhoea, are all common illnesses, the doctor stated, for which most people treat themselves without bothering to consult a doctor.

Headache, not a disease itself, but a symptom that some other part of the body is not functioning properly, the doctor said, might be treated at home with rest, an ice-cap on the forehead, or a cloth kept cold by frequently being wrung out of ice water. Repeated headaches are a sign that something is wrong somewhere, and your doctor should be consulted, Dr. Wright advised his hearers.

"Take an earache or a discharging ear immediately to your physician, or deafness might result from neglect, or half measures used in home treatment," the doctor stated emphatically.

Go to your dentist as soon as possible in the case of toothache, and visit him once every year, even if your teeth seem all right, was what Dr. Wright told the members of the Young Mothers' Club.

"For colds," the doctor said, "take a hot bath and a hot drink, such as lemonade, and go immediately to bed, rest, eat light food and drink plenty of water.

"If the cold doesn't clear up in twenty-four hours, and there is any fever, sore throat, severe cough, or discomfort in the chest, see your doctor immediately.

"Repeated attacks of upset stomach, particularly if accompanied by severe pain, are indications that a physician is needed," the doctor said in speaking of stomach disorders, which so many people are inclined to treat themselves. "The person isn't a physician does not know how to prescribe for a sick stomach, and the medicine taken is likely to make a serious condition more so. Eat no food, or only very light food in cases of upset stomach, and do not heartily when overtired or nervous, or just before going to bed. Diarrhea, caused by irritation of the intestines, is treated just as you would an upset stomach, and if it persists, see your doctor."

Dr. Wright gave the members of the Young Mothers' Club some valuable suggestions for the cure of constipation. He advised, first of all, not to get into the habit of taking cathartics or enemas, and to have a regular time for the bowel movement every day. A glass of cold water on arising, followed by five or six glasses during the day, together with the restriction of the use of tea, boiled milk, cocoa and cheese, until the constipated condition has passed, was advised by the physician.

The foods to aid in the cure of constipation, the physician said, were foods with bulk, coarse cereals, whole wheat or rye bread, green vegetables and fruits, and foods that act somewhat as lubricants, such as cream, olive oil; or those having considerable indigestible fibre, such as figs and dates. Sufficient sleep and exercise were suggested as an aid to constipation, and the members of the club were advised to consult their physicians, if after using these suggestions

the constipated condition continued.

Heartburn, caused by a disturbance in the digestive juices of the stomach, and having nothing to do with the heart, Dr. Wright said, was easily relieved by taking a half teaspoonful of soda bicarbonate in water. Tea, coffee and spices aggrevate this condition, and as in the case of other common illnesses, heartburn is a matter for consultation with your doctor if you have it frequently.

"It is not normal, as many people suppose, for women to have severe pain at the menstrual period," Dr. Wright stated to his interested audience, speaking of dysmenorrhea. "Considerable pain at that time is a cause for consulting your doctor, and no drugs are to be taken at that time without his advice. Heat applied to the abdomen by the use of hot water bottles, or an electric pad is the best home remedy for this trouble. Any discharge, or bleeding between periods may be an indication of some serious trouble, such as cancer, and news of such a condition is best conveved to your doctor at an early date."

After Dr. Wright had discussed the common illnesses, given their symptoms, and suggestions for treatment he told the members of the Young Mothers' Club how to treat emergencies until the doctor could be secured.

"There are three questions which are wise to keep in mind when you are suddenly called upon to treat emergencies," Dr. Wright said. "The first thing you want to ascertain is whether or not the patient is breathing. If the patient is not breathing everything else must be disregarded until the breathing is brought back, or until the doctor pronounces the patient dead.

"Artificial respiration, which I will take up in detail later, is the means used for restoring breathing in a living person. The most common causes for the stoppage of breathing in a living person are: drowning, gas poisoning and electric shock.

"Is the patient bleeding dangerously? is the second question you want to keep in mind when a person is seriously sick or injured. If the patient is bleeding, the hemorrhage must be stopped before any other treatment is given, or he may bleed to death.

"Sometimes in cases of serious injury the patient may still be in a place where his life is still being endangered, if so move the patient immediately, otherwise it is best not to attempt the moving of the patient yourself, but to wait until the doctor arrives and orders his removal.

"Cut off clothing if it stands in the way of an examination to discover the extent of injuries. Don't let the skin become chilled. If there is stoppage of breath immediately begin using artificial respiration. If there is serious bleeding, check the flow of blood before doing anything else.

Dr. Wright then took up an interesting explanation of artificial respiration, which is the means of restoring breathing to a living body. Whatever the cause for the stoppage of breathing, usually drowning, gas poisoning, or electric shock, Dr. Wright said, the treatment was essentially the same. Artificial respiration consists in forcing the patient's chest to imitate the movements of ordinary breathing, and is known as the Prone Pressure Method of Dr. Schaefer.

"Feel in the patient's mouth," the doctor said, "and remove any obstruction, such as tobacco, or false teeth. If the mouth is closed make no effort to pry it loose. This can be attended to later. The main object is to begin artificial respiration movements as early as possible.

"The position in which the patient is placed to begin receiving the artificial respiration treatment is important. Lay the patient on his belly, one arm extended directly overhead, his other arm bent at the elbow, and hand and forearm well away from face. The face is turned outward and resting flat on floor or ground, so that his nose and mouth are free for breathing.

"The patient in position, the person who is to do the work of restoring natural breathing, kneels, straddling the patient's thighs with the knees placed about midway between the patient's hip-bones and his knee joints. Next, place the palms of the hands on the small of the patient's back with the fingers resting on his ribs, the little finger just touching the lowest rib, with the thumb and fingers in a natural position, and the tips of the fingers just out of sight.

"With arms held straight, swing the body forward slowly from the waist so that its weight is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at the end of the the forward swing. The operator should not bend the elbows. This operation takes about two seconds.

"Now immediately swing the body backward so as to remove the pressure upon the patient completely.

"Wait two seconds, then repeat the swing forward. In this way the double movement of compression and release are to be repeated deliberately twelve to fifteen times a minute, a complete respiration in four or five seconds.

"Artificial respiration is to be continued without interruption, until natural breathing is restored, if necessary four hours or longer, or until a physician declares the patient is dead.

"Any tight clothing about the patient's neck, chest or waist is to be loosened as soon as the artificial respiration is started, but the person who is doing the work of restoring the patient's breathing is not to stop to do this. Another person looses

the clothing. It is especially important to keep the patient warm, and don't give any liquids by mouth until the patient is fully conscious.

"When the patient revives keep him lying down to avoid strain on the heart. If by the time the patient has revived the doctor has not arrived give some stimulant, such as a teaspoonful of aromatic spirits of ammonia in a small glass of water or a drink of hot coffee or tea, and I want to repeat again, keep the patient warm.

"It is best to carry resuscitation on in a safe place as near as possible to the place where the patient was overcome. Don't move him until he is breathing naturally, and them move him, if possible, only in a prone condition. If weather conditions, or any other conditions make necessary the moving of the patient before he is breathing normally, carry the resuscitation operations on while he is being moved.

"Brief returns of natural respiration are not a sufficient reason for stopping the resuscitation work. After a temporary recovery of respiration the patient will frequently stop breathing again. The patient is to be watched carefully after normal breathing has returned, and if he stops breathing artificial respiration is to be again resorted to at once.

"Before normal breathing has been established it may be necessary to change the operator. Make this change without losing the rhythm of respiration, which is a double movement of compression and release repeated deliberately twelve to fifteen times a minute, and a complete respiration in four or five seconds.

"Oxygen-carbon dioxide inhalers are sometimes available. Municipal fire departments, safety departments of big corporations, and hospitals usually are equipped with inhalers to aid in securing the return of respira-



This fine little fourteen months old Guilford County girl lives on Route No. 1 from Greensboro. Her mother says she is a "Fresh air, sunshine, balanced diet baby who has never been sick." She had toxin-antitoxin at eight months, vaccination against smallpox and typhoid fever later.

tion to a living body. If an inhaler is sent for do not wait for it to arrive, but begin artificial respiration by the method I have just described to you, immediately. When it arrives do not stop artificial respiration. Have an assistant apply the mask of the inhaler, fitting it closely over the patient's nose with the lower part placed well down over his chin, taking care to avoid leakage.

"Keep the inhaler on the patient for about half an hour or until he is fully conscious or can speak and when spoken to, can answer intelligently. The inhaler doesn't make the patient breathe. Use artificial respiration with the inhaler in place on the patient until he breathes naturally; then let him continue to breathe naturally through the inhaler some minutes. He may stop breathing, so observe him closely."

After his explanation of the method of artificial respiration, Dr. Wright next told the members of the Mothers' Club what the signs of shock are. Dr. Wright said that in most serious accidents and even in trivial ones a certain degree of what is known as "surgical shock" was likely to be present. "Surgical shock," he explain-

ed, was due to a depression of the nervous system, which results directly in failure of the blood vessels to maintain proper distribution of the blood supply.

He gave as the signs of shock: pale skin, blue lips and nails; cold moist body; a weak and rapid pulse; stupor and possible unconsciousness; and possible vomiting or hiccoughs.

Unless there is serious bleeding, shock is the first thing to be treated in an emergency, Dr. Wright said. In treating shock the first thing to do is to refrain from talking of the wound, and keep the patient from looking at his wound. Send for the doctor, and proceed to give emergency relief by placing the injured person flat upon his back with the head somwhat lower than the body, if possible. Next, keep the patient warm. Blankets, heavy clothing, hot water bottles, hot bricks or stones are all means of keeping the patient warm, but hot water bottles, bricks and stones are not to be placed too near the patient, or they might burn the skin. Under the covers massage the legs and arms, working toward the body.

Aromatic spirits of ammonia are an aid in recovery, and the patient may be given half a teaspoonful of aromatic spirits of ammonia in hot water when he is able to swallow. Such hot drinks as tea, coffee, milk or broth are also aids to recovery.

Unconsciousness, or fainting, Dr. Wright stated, might be caused by any number of things. If possible, he said, it was best to try to discover the cause of the unconsciousness, and then give the special treatment required. If the cause of the fainting is not easy to determine, place the unconscious person in a reclining position with nothing under his head if pale, and with a pillow under his head if his face should happen to be red.

In fits, or convulsions the patient is to be kept as quiet as possible, and protected from injuring himself. It is also wise to place something in his mouth, possibly a stick, to prevent tongue biting, and send for a doctor.

"A badly injured person," Dr. Wright said, "is to be moved only when it is absolutely necessary, and when he is carried do it with the greatest gentleness without jarring. Carry severely sick or injured persons lying down on some kind of a stretcher. One way of carrying a patient at home, when no stretcher is available, is to place the patient in a strong kitchen chair. One person takes hold of the front legs of the chair, the other of its back, then tilt the chair back so the patient is partly lying down, and carry him in that way."

At this point the doctor stated that he had talked as long as his allotted time upon the subject of "First Aid in the Home." He said he would still like to take up the subject of injuries, both those where the skin was and was not broken, foreign bodies in the eyes, ears, nose and throat, injuries from fire, heat exhaustion and heat-stroke, electric shocks and burns, poisens and some cautions for preventing home accidents, but that he was afraid that if he did so at this meeting he would unnecessarily tire the club members.

A motion was then passed by the members of the Young Mothers' Club to invite Dr. Wright to be present at their first August meeting, to complete his talk on first aid subjects that he had not covered during his talk at the July meeting.

The reporter from the Crafton Herald volunteered to be present at this meeting also, and report the doctor's talk fully for her paper, as she said she felt the doctor's talks were of value and interest to all of the mothers in Crafton, and that her paper was glad to print complete reports of the doctor's talks.

The Crafton Herald reporter's account of Dr. Wright's talk to the

members of the Young Mothers' Club of Crafton, at their August meeting will appear in the August number of The Health Bulletin.

NO OLD AGE DEAD LINE HERE

By

EDWARD J. WICKER

Frank Glenn. veteran linotype operator with the News and Observer, is celebrating his 65th birthday, and fellow workers say that his "string" is as long as the best of them, despite his age. Frank is evidently trying to explode the theory that a man is through when he reaches the age of He has been a faithful worker on this paper ever since the first paper was published with Josephus Daniels as editor and publisher. Contrary to all rules, Frank Glenn was told last week that as long as he lived he had a job, and that from now on he was only to work when he felt like it, the only requirement being that he must see that a sub covered his machine during his absence, and that the pay envelope would remain the same-work or no work. It gratifying to make this report, when so many men much younger are being thrown into the discard. If there were more employers of labor of this type this old world would be a much better place in which to live, and the men would always render the best service of which they are capable. Having worked with Frank in the old hand-set days, when the oil lamp was the best possible light for 12 to 15 hour day on a morning newspaper, we know his many good qualities, and extend to him congratulations and best wishes for many more years of usefulness.—The Union Herald.

HEALTH ACTIVITIES IN INDUSTRY*

By

E. S. THOMPSON, M. D.

Industrial medicine and surgery is a new specialty in this state. It deals with the human maintenance problem in industry. For many years our modern industrial concerns have regularly employed experts to study their expensive and complicated machines, in order to preserve their mechanism and obtain their maximum efficiency. The human machine, the most complicated of all, has been sadly neglected. Company surgeons have been employed for a long time but their duties

rarely extended beyond the repair of injuries for which the company was liable under the old common law, or the workman's compensation law. The new specialty of industrial medicine not only furnishes adequate medical and surgical care when necessary, but includes all measures bearing upon the health, welfare and working ability of employees; so that now medical supervision of the employee's health has become an essential part of the organization of many of our progressive industries. The modern employer

^{*} This paper was read at the Health Officers Meeting at Pinehurst, April 28, 1930. Dr. Thompson is a member of the medical staff of the R. J. Reynolds Tobacco Company of Winston-Salem.

has come to realize that the human machine pays a large return on the investment in its upkeep, and the efficiency of its whole organization is in exact proportion to the health of its employees.

Physical health is man's greatest asset; and as this is true individually, it must be true collectively, therefore the capitalizing of it should become a real factor in all industries. The result of a well organized industrial medical department should be as beneficial to the employer as to the employee.

To the employee it means more healthful and better working conditions, which stimulate production and increase wages. It helps prevent discontent and labor unrest. It means better home conditions, for which the plant furnishes a stimulus, and sets an example. It prevents causes of disease, accidents, and loss of working power. It discovers disease in its early stages and makes possible its rapid and certain cure. It treats accidents early and prevents infections and consequent loss of time and suffering. It prevents overwork, controls contagious diseases, and reduces the hazards of occupation.

To the employer it means a larger financial return, the extent of which it is hard to estimate. It increases the efficiency of the human machine, cuts down absenteeism, decreases labor turn-over and tends to build a good will between employer and employee.

The amount of illness in any organization depends to a large extent upon the type of industry and efficiency of its medical department. In spite of the remarkable development of medical science in the last few decades, illness and defectiveness still persist, caused in part, at least by preventable and avoidable conditions. Most of the misfortunes of life, of poverty, of broken homes, etc., are

caused by disease-the common misfortune of all. Sickness and the cost of it, a problem so large as to touch every individual life and so important in our industrial as well as our political life, to be a matter of real concern to every one who has risen to the level of citizenship. Those of you who have read the reports of the "Committee on the cost of medical care" in the United States will see that the fields are still white unto the harvest. The average individual between the cradle and the grave spends one-fortieth of his time in bed because of some incapacitating illness. The average worker loses two per cent of his time, or a fraction over seven days per year, due to some disabling disease. Hence approximately fortieth of our population is continually incapacitated to earn a livelihood. Reliable studies indicate that where there is one person sick there are at least two physically impaired to the extent of from ten per cent to fifty per cent of their efficiency. Estimating that there are about thirtysix million wage earners in the United States, you can easily see the bigness of this problem.

The cost of sickness, doctors. nurses, hospitals, loss of income, loss of production, etc., plays a vital part in the economic status of our whole population. The annual expense to the people of the United States for medical services is estimated to be in excess of two and one-half billion dollars, or about twenty dollars per capita, or approximately one hundred dollars per family. The average wage earner's family, according to studies conducted by the United States Bureau of Labor Statistics, pays \$60.39 per year for medical service. If we consider the loss from decreased wage earning due to sickness and accidents, plus the expense of medical service, you will easily see how the entire program of sickness is one that the industries must reckon with; because the two major problems that are facing them today are: (1) Cost of production, (2) Purchasing power of the people. Just what part each organization would play in helping solve this tremendous problem of sickness and associated misfortunes, is one that must be worked out to fill the needs of its own environment. Each separate industry has its own peculiar hazards, and yet all have a common problem—that of a wage earner sick and unable to produce.

As a further proof of the need of "Health Activities In Industry," an act of our last legislature made it obligatory on industries that they take into consideration the accidents which their employees sustain while in the performance of their duties, as practically every other state in the union has done. For every accident sustained sufficient to cause loss of time for over seven days must be paid for in part by the employer plus all medical expense. Hence all modern industries should be continually taking stock of their human machines, so that they may function as nearly one hundred per cent as possible.

The R. J. Reynolds Tobacco Company has maintained an organized medical department since 1919 and its work has justified its existence, until today it is almost an indispensable part of this large and efficient organization. Our equipment includes general dispensary or plant hospital in connection with the employment department, located on the floor of our new nineteen story office building. In here we have dressing rooms for applicants, examining room, accident room, operating room, x-ray department, two wards, and a fully equipped dental department with one doctor, one dentist, and two nurses, all on duty all working hours of the factories. In each factory we have a first aid station with a grad-



This little piece of humanity at four months of age and weighing less than seven pounds, and in bad physical condition, was found by a Durham Health Department nurse. The baby was brought to one of the several excellent baby clinics sponsored by the Durham Health Department. The child was placed on a definite diet of dry lactic acid milk, furnished by one of the big commercial companies. Orange and tomato juice of course was added. Five months later this photograph was made. It indicates a normal healthy baby.

uate nurse in each. We have ten such stations.

The examination of applicants for work includes first an interview by the employment department, then a routine physical examination. doctor here has a double duty; (1) that of weeding out the unfit, (2) classifying the others according to the work they are able to do. Here it is essential that the doctor know the kind of work each applicant is expected to do. We divide all applicants into three classes: Class A, those able to work anywhere they are needed; Class B, those able to do limited work, due to some physical condition; Class C, those rejected for work, due to some contagious or infectious disease, or some deformity which incapacitates from work. Each applicant employed is required to be vaccinated for smallpox unless he shows evidence of immunity. After examination applicants are returned to the employment department and sent to the different factories.

If an employee gets hurt while working, he or she is required to visit the first aid station immediately and receive treatment for the injury. however trivial. If the injury is of a more serious nature, the patient is sent at once to the plant dispensary. No patient is kept over night, so that if the patient is not able to return for treatment, he or she is sent to one of the hospitals in the city. One of the most important points in keeping injured people from losing time is to treat the injury immediately. prevents infection and makes the injured better satisfied. The fact that you have medical service available near the injured's place of work stimulates a wholesome relationship between employer and employee.

Medical cases go through the same routine as accident cases. If an employee gets sick while on the job, he is sent to the first aid station and the nurse in turn sends him to the doctor if necessary. Our examination is as nearly complete as we are able to give in an office visit, including laboratory work, x-ray, dental, etc. If the employee is too sick to return work, he is advised of his condition and sent home with the instructions to get his family doctor, if the condition does not clear up as it should. Before any sick employee is allowed to go home he is required to visit the medical department and is excused by that department, with a note to his or her foreman stating why and probable time he will be out. Any employee who is out from work on account of sickness for more than three days is required to visit the medical department before returning to work. In this way we prevent many sick cases from coming back to work before they are well. Any employee who is a member of our group insurance plan and is out sick more than seven days is eligible to draw compensation for lost time. The amount received will be in proportion to the salary sick employee made while at work. If he dies, the beneficiary will be paid immediately upon proof of death a sum in proportion to the income of the insured during his last year of work.

The dental department is open all day during working hours and any one in need of dental work gets a permit from his or her foreman and is then sent to the dental office by appointment. Here we do prophylaxis, extractions, and a moderate amount of filling. This department does its most good in the education of the people as to the needs of dental care, and is looked upon very favorably by the dental profession in our city.

The following from last year's report will give you some idea of the amount of work done:

No. of patients for extractions... 2,538 No. of patients for prophylaxis.... 427 No. of patients for fillings 363

Total number of patients 3,328

A record is kept of each employee from the time he enters our employ. In this folder is the record of his physical examination on entrance, the accidents he has had, times he visited the medical department and cause any any other information that we know that pertains to his health. These folders are filed in the medical office and are worked each week into a live and dead file, so that we have at all time easy access to as complete a medical record as we are able to get on each employee.

The magnitude of the work we are doing in the industry of R. J. Reynolds Tobacco Company will be seen from the following summary of our last year's report:

No. of medical cases treated....32,836 No. of accident and surgical

cases _____31,530

Total number of cases 64,366
This is an average of about six visits per employee during the year,

exclusive of return visits for dressings in surgical cases.

In addition we gave complete immunizing treatment for:

- 1. Typhoid to ______ 3,102 people
 2. Smallpox to _____ 1,119 "
- Industrial leaders today have come to realize that the greatness of their industries is not measured by the number of their machines nor the size of their buildings but by the human relationship that exists therein.

"SANITATION APPROVED"

A NEW SIGN ALONG THE HIGHWAYS TO INSURE HEALTH PROTECTION

WATCH FOR IT

By H. E. MILLER, Chief Engineer North Carolina State Board of Health

A general public exasperation has been expressed in speech and in print on the subject of the desecration of the landscape by unsightly billboards and signs along the highways. North Carolina's budding consciousness of "things beautiful," that has been so tenderly fostered and nourished by the patrons of art, has been enraged and well nigh blighted by the growing spectacle.

Reprehensible as this tendency may be, in it's most ghastly aspect, it cannot compare as a spectre of hideousness with the dragon that rears himself in the path of the thousands of our citizens diligently burning gas at five cents per. to help the highway commission build more good roads. This new dragon was conceived when the first service station operator brought in a bucket of water from his polluted open dug well in the days of clincher tires when "cranky tin lizzies" were cranked, to entice the perspiring motorist to stop for a drink of water and incidently a few gallons of gasoline. The slimy pup (if baby dragons be called pups) liked the prospects, and so when it dawned on a neighboring service station operator that comfort station facilities might attract more customers, the dragon winked his eye in fond anticipation. True enough, the comfort station toilets soon became foul, illkept, and a model in the abuse of sanitation. Our dragon winked his other eye and reflected "life here surely looks promising."

Now that the ribbons of concrete have rapidly penetrated the provinces," climbed the mountains and straddled the swamps. have blossomed out countless service stations seeking by every possible device to attract the passing traveler. Many of these stations are a credit to themselves and the community. but sad to relate, among the attractions offered by many are drinking water from hundreds of open wells teeming with germs of disease. Socalled comfort stations, that generally should be more appropriately termed "incubators of disease guaranteed to transmit infection to the

traveler and the community alike," which compete with one another in repulsiveness. Eating establishments and lunch counters reeking with filth, teeming with flies and presided over by persons incapacitated for a more active life because of venereal disease or the last stages of tuberculosis are not unusual delicacies with which the traveler is tempted. Who knows which are safe and which are unsafe unless some public agency separates the "sheep from the goats." This is what the "SANITATION APPROV-ED" sign is designed to do.

Meanwhile our dragon has waxed fat and strong in his slimy grandeur, and has burst forth in all his glory with blazing eyes and fire shooting from his mighty nostrils to the skies, and behold his name—VACATION TYPHOID!

The principles of sanitation in the control of the environment are well established and their significance so well recognized that every selfrespecting municipality has long ago provided a safe water supply, and in most instances rigid sanitary control of the milk supply and food handling are practiced. Up to ten or fifteen years ago these measures provided a reasonably safe sanitary control of the environment of persons living in municipalities, whose environment was then bounded by the corporate limits. In the past few years, however, the limits of environment have been extended beyond the corporate limits beyond the mile zone of police jurisdiction, even unto the most distant point on every highway in every direction, bounded only by the distance the family pocket book will permit the family flivver to travel.

When Mr. Average Citizen used to take his vacation he took a train. The drinking water and the food served on the train are regulated by the Federal government under the interstate quarantine regulations. His des-



This young gentleman is four years old and a valued citizen of the good town of Wilson. He is evidently beginning his summer vacation without physical handicaps.

tination was perhaps some mountain city or town or some accessible seaside resort, where again there was some measure of protection afforded through the sanitary regulation and control of the environment by the City Governments having jurisdiction. Ordinarily he took his trunk along and stayed at his selected destination until returning home again by Thus the traveler or vacationist lived, traveled, sojourned and returned, always in surroundings and under circumstances where he enjoyed the protection of the ever watchful health agencies of City, State and Nation.

What happens today? The same Mr. Average Citizen loads mamma and the children in the flivver and off they go for a vacation. They stop nowhere longer than over night. To

save time they get their lunch at some lunch counter along the road while the tank is being filled with gas or the crank case is being drained. They drink water obtained from all manner of sources and surroundings, They eat some good and some bad. food in all kinds of places served by any and every body, supervised by no public agency. They give the baby milk, often produced and handled in filth, by persons reeking with disease. What happens? What promised to be a happy lark, turns out to be a catastrophe. First the baby nearly dies with diarrhea, then about a week after returning home papa and Johnny develop typhoid fever. Papa finally pulls through after a serious illness, and the loss of three months time from his work or business. Johnny, poor boy! has passed on to his reward. Mamma is broken physically and in spirit from the ordeal and papa has to mortgage the old home place to pay off the doctor, the undertaker, and to keep the wolf from the door due to his loss of earnings during sickness. VACATION TY-PHOID! - See how our dragon thrives!

Through effectively administered measures of water supply and food control, and the sanitary disposal of excreta and sewage, by means of sanitary privies and modern plumbing, epidemics of typhoid fever have virtually become a thing of the past, and the occurrence of typhoid fever in our municipalities has become exceedingly rare.

Health officers investigating such cases as do occur, however, usually find themselves up against a stone wall in the midst of the investigation because it usually develops that the patient was away on a vacation or had returned from a trip about 10 days or two weeks before being taken sick. The determination of probable cause is thus impossible, because

who can recall what he ate or when, where he stopped for a drink of water or where he drank a glass of milk. The investigator can only report VA-CATION TYPHOID. How many other persons have been exposed to disease at the same source? The riddle will never be solved.

Our older readers may recall some twenty years or more ago that it was not a rare occurrence for one or both of the bridal couple returning from a honeymoon to develop typhoid fever shortly thereafter. The Niagara Falls City water supply was at that time heavily polluted, and is estimated by health authorities to have been the specific cause of thousands deaths from typhoid fever in cities. hamlets, and farm homes all over the United States. The actual havoc that was wrought, is another riddle that never will be solved. We have here in North Carolina "Little Niagaras" all along our highways.

The State Board of Health is and has been fully aware of the menace that exists, but it has neither the authority nor the facilities to regulate, or to require improvements. It has, therefore, undertaken a voluntary programme of improved, roadside sanitation. It is believed that there are enough conscientious managing these roadside accommodations to secure a response that will cause a material improvement. It is believed further that the traveling public will sufficiently appreciate the protection afforded, so that enterprising service station operators will find it a paying proposition to respond to and further this voluntary clean up.

"SANITATION APPROVED"

As a partial measure of correction the following programme is outlined:

Any establishment, located on a state highway, and offering any or all the following accommodations, drinking water, comfort station,

meals, or lodging will be permitted to display a sign "SANITATION APPROVED by the STATE BOARD OF HEALTH" after having complied with certain conditions. The signs, of metal, will be issued in pairs and may be displayed in conspicuous places visible from both directions. Each pair of signs have a serial number. Before receiving the signs the management must first have complied with the detailed sanitary requirements for each of the above accommodations offered.

Letters have been sent to all of the fifteen thousand service stations in the state explaining the "SANITA-TION APPROVED" programme, and forwarding copies of the sanitary regulations, and a blank form for making application for a sanitary inspection which will be made free of charge. Upon receipt of an application for inspection, a state or county sanitary inspector will make the inspection as promptly—possible.

When upon inspection the station is found to be in FULL compliance with the sanitary regulations the management may be authorized to display "SANITATION APPROVED" sign upon signing three copies of the "SANITATION APPROVED" sign contract and upon payment of one dollar to defray the cost of making the signs.

The inspector forwards three signed copies of the contract and the dollar, along with his report recommending the station for display of the sign. The State Board of Health completes the execution of the contract and returns two copies together with a pair of "SANITATION APPROVed" signs bearing serial number. Each of the two contracts are required to be posted in conspicuous places designated by the State Board of Health. (see "SANITATION APPROVED" sign contract on page 32).

This contract is required to be post-

ed in conspicuous places in order that the traveler may know what "SANI-TATION APPROVED" stands for. It will be observed also that the public is invited to notify the State Board of Health of any violations observed. This is an undertaking "for the people" and it is hoped that the public will show sufficient interest make it also "of the people and BY the people." All that is necessary in making a report is to address a post card or letter to the State Board of Health stating the serial number of "SAN-ITATION APPROVED" sign, the condition observed. All reports are considered confidential.

Local health agencies are showing a keen interest and a ready cooperation, which is essential to the success of this undertaking. The Carolina Motor Club has extended the fullest cooperation and is aiding the programme in every possible way. Many complaints as to existing conditions have been made by motorists to the State Board of Health. That agency is now prosecuting a programme of correction. It's success depends largely on the interest you, Mr. Motorist, demonstrate, both as to helping descipline the careless stations, and giving your patronage as a recognition and to encourage those who seek to protect you.

If you will look for the "SANITA-TION APPROVED" sign when seeking a service station and report violations, our dragon VACATION TY-PHOID will find the atmosphere and the environment not so much to his liking and will finally slink off and make his slimy ghastly way to some more auspicious clime, removing his shameful presence from our midst.

If you have a romantic urge, if you ever aspired to be a "dragon killer" look for and patronize those service stations that display the "SANITATION APPROVED" sign, and your ambition will be gratified.

"SANITATION APPROVED"

SIGN AGREEMENT

FOR THE PERIOD JULY 1, 1930 to JUNE 30, 1931

Sign No. upon the followi	re to display "SANITATION APPROVED"
wherein the following service and	accommodations to the traveling public
which have been approved by the St	ate Board of Health, are offered
	as paid the North Carolina State Board of cost of making sign hereby acknowledged
and agrees:	eost of maning sign heres, action leaged
1. To comply at all times with Board of Health pertaining to the a	all the sanitary requirements of the State
	of Health of any changes in conditions of impair the sanitary status of the above
3. To notify the State Board services, either comfort station, drin	of Health of any contemplated additiona
4. To refrain from the inaughereinbefore cited and approved.	uration of any such additional service no
as the State Board of Health shall	_
transferred, either as to managemen	_
ments cited in Item 1, upon the re- upon the violation of provisions of possession and privilege of display agrees to deliver the same to any of Health upon request, or to mail said 24 hours after receipt of written in to that effect.	ct any violations of the sanitary require peated violation of such requirements, or item 5 or 6, he surrenders his right to the of the "Sanitation Approved" sign, and fficial representative of the State Board of Item 1 of the State Board of Health withing structions from the State Board of Health withing structions from the State Board of Health
State Board of Health and that up	remain the property of the North Carolina on failure to surrender or mail the same gain display a "Sanitation Approved" sign months.
Signed Sign	ed
	North Carolina State Board of Health
	eau of Sanitary Engineering and Inspection
Date Sign	ed By

The public is requested to report to the State Board of Health with "SAN-ITATION APPROVED" sign number, any insanitary conditions observed upon these premises. All reports are considered entirely confidential and will be promptly investigated.

Published by THE N°RTH CAROLINA STATE BOARD & HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

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AUGUST, 1930

NO. 8



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

German Measles

Adenoids and Tonsils Cancer Constipation Co'ds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies Fly Placards

Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pellagra Public Health Laws Prenatal Care Sanitary Privies Scarlet Fever

Smallpox Teeth Tuberculosis Tuberculosis Placards Typhoid Fever Typhoid Placards Venereal Diseases Water Supplies Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West) "Our Babies Prenatal Letters (series of nine monthly letters) Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Babies Hints to North Carolina Mothers Who Want Better Babies

Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).
Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 vears.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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BOARD'S BUDGET REDUCED

The State Board of Health is putting into effect reductions in its budget equivalent to thirty per cent for the biennium of 1929-31 in accordance with directions from the Director of the Budget. The executive committee of the Board, Dr. A. J. Crowell of Charlotte, Dr. Cyrus Thompson of Jacksonville, and Dr. Thos. E. Anderson of Statesville, in special session on Saturday, June 28, approved the proposed budget cuts for the several divisions of the Board and ordered that they be made immediately effective.

The reductions to be made are drastic and will require considerable doubling-up on the part of the personnel retained to carry on what is considered absolute minimum essentials of the Board's program for the protection and promotion of the State's public health. The reductions affect every division of the Board and include: reduction in field personnel of Bureau of Sanitary Engineering and Inspection totaling \$13,967; dropping the director, Dr. A. B. McCreary, and one clerk in Bureau of Epidemiology with duty of field epidemiologinvestigations transferred other personnel; discontinuing all field activities of Bureau of Maternity and Infancy by not replacing the director, Dr. George Collins, deceased, and by dropping the supervising nurse and four field nurses, retaining two office clerks to maintain correspondence course with expectant mothers and other essential duties; reducing field personnel of Bureau of Medical inspection to Schools to basis of supervising dentist and six field dentists and seven field nurses for school inspection work required by law; dropping the director of the Bureau of Vital Statistics, Dr. F. M. Register. and two clerks in that division, and temporarily discontinuing the Bureau of Health Education as a separate unit, combining Vital Statistics and Health Education under the direction of Dr. G. M. Cooper and reducing the Health Bulletin from 32 to 16 pages monthly; abolishing the Life Extension division; reducing the Laboratory of Hygiene appropriation by 20%; reducing State Aid to counties by a total of \$16,715; reducing appropriation for Orthopedic clinics and Cancer Control by 20% each; effecting a net saving of \$5,000 in Miscellaneous Items allotted to the several divisions of the Board.

The program of reductions by divisions consists of the following items:

Administration	\$10,840
Engineering and Inspection	13,967
Epidemiology	7,420
Maternity and Infancy	
Medical Inspection of Schools	11,331
Vital Statistics	7,700
Health Education	700
Life Extension	9,100
Laboratory of Hygiene	13,600
State Aid to Counties	16,715
Orthopedic Clinics	2,000
Cancer Control	500
Miscellaneous Items	5,000

"The executive committee of the Board considered most carefully the reductions necessary to be made in the Board's budget," says Dr. Charles O'H. Laughinghouse. "We were faced with the problem of finding 20% of the appropriation to the Board for the fiscal year 1930-31, amounting to \$99,294. In addition the Board for the fiscal year 1929-30 had failed in the sum of \$21,000 to effect a saving of 10% of the appropriation. In order

to meet mandatory directions from the Budget Bureau we therefore had to find a total of \$120,294 which could be eliminated from the budget for the current year. This the executive committee has done, and on the reduced program the State Board of Health will carry on, with the assurance to the people of North Carolina that every possible service will be rendered within our budgetary limitations."

PELLAGRA: ERADICATED FROM ITS HOME IN ITALY NOW SPREADING OVER NORTH CAROLINA

 $\mathbf{B}\mathbf{y}$

G. M. COOPER, M. D., Editor The Health Bulletin

Judging from the reports of pellagra coming from all over North Carolina at present, there can be no consideration in the whole field of medicine at this time of any greater importance to the people of the State than the problem of dealing immediately and successfully with this disease.

According to most medical historians, the first definite written description of pellagra was by a Spanish physician named Casal. His description was written in 1735, but was not published until many years later. Many medical writers, including the late Dr. Edward J. Wood, were confident that Hypocrates definitely described pellagra in his writings. However he did not designate the disease he was describing as pellagra, or by any name even resembling it, but his descriptions of certain phases of one or two other diseases in his time have led many modern writers to believe that pellagra existed in Egypt and Greece twenty-five hundred years ago. Beginning with Casal's description in 1735, the disease has been definitely recognized ever since. Italy and Roumania have been regarded as the endemic home of the disease.

The first definite recognition of

pellagra in North Carolina was in 1907. Wood says that Osler was primarily responsible for a stimulation of a study of the disease in this country. This was to have been expected because of his wide knowledge and foresight in the whole field of medicine all over the world. Soon after the disease appeared in North Carolina and other sections of the South much apprehension was felt on account of the possibility of a widespread distribution of the disease. At that time most of the patients who contracted the disease died.

Sometime during this period Osler made a special trip to Italy to study at first-hand the methods of the medical profession and the Italian government in dealing with the disease. He reported that at the time of his visit there were some seventy thousand cases of pellagra in Italy, the population of which at that time was about thirty-five million. He reported that the government had erected about fifty hospitals, following the experiment of the royal hospital first built to deal specifically with the disease. These hospitals were called pellagrous hospitals, the functions of which were something similar to our tuberculosis hospitals for dealing with tuberculosis in this country. It is understood that the Italians do not now regard hospitalization as having had any great beneficial effect toward the eradication of the disease.

Some thirty years ago the disease was of such extent in Italy that the appropriated a certain government amount of money to go to each patient suffering from the disease. The disease at that time was almost exclusively among the poverty stricken population of the Italian empire. The appropriation of money for the patients served two purposes. It first enabled the Italian health authorities to obtain accurate reports of the extent of the disease, and, second, it enabled the people to provide themselves with better food, housing, and medical care. The experience of the Roumanian government has been similar to that of Italy.

Following the appearance of pellagra in North Carolina in 1907, the disease soon became very widespread in certain sections of the State. Although it was long before the vital statistics law of the State was enacted, it is thought now that the disease was numerous, and known to have caused a great number of deaths, in many sections of the piedmont region of North Carolina and of what might be called the western part of the coastal plain section. The disease never has been as prevalent in the extreme coastal counties where the people have always lived largely fresh vegetables of their own raising, including both kinds of potatoes, and where they have consumed the year round an abundance of sea food. Until recently the mountain sections North Carolina have hardly known the presence of the disease. However, during the last four or five years there has been an increasing spread throughout some of the mountain counties which had never hitherto known the presence of the disease. Even today some of the more prosperous dairying counties like Watauga and Catawba are reporting a small number of cases of the disease, as compared with many of the other mountain counties.

Experience In Italy

As already stated, Italy has been regarded as the endemic home of pellagra, although its incidence at its highest peak was not as widespread and as serious as the situation which exists in North Carolina today. As the people of this State are right now confronted with the problem as never before, and as intelligent action, cooperation, organization, and level-headed, common sense efforts must be effected, if the disease is to be controlled, there can be no more important study for the people North Carolina than a consideration right here of the methods that have proved successful in Italy.

Sometime last March the writer wrote a friend of his who has been spending the past year in the London School of Tropical Medicine and who was sent to Italy for a six weeks study of tropical diseases in country as a part of his course, and asked him for any first hand information which he could get on the ground, and which would be of benefit to the medical profession and to the people of North Carolina in dealing with this fearful disease. Dr. B. E. Washburn, the name of our friend, responded with some first hand information of interest and importance to us. Under date of March 28, Dr. Washburn wrote to us as follows: "I have just returned from a trip into Sicily and find that a summary of the Report of the Pellagra Commission has been made and translation mailed to you."

This report was summarized and translated by Dr. L. W. Hackett, director of the Rockefeller Foundation of the International Health Board for Italy. We feel greatly indebted to Dr. Hackett and to Dr. Washburn for

this interesting translation, which we publish below. The first summary we quote is contained in a letter from Dr. Hackett at Rome to a Southern State health officer who had written him for information a short time earlier. Dr. Hackett's letter follows:

"The only official measure ever taken in Italy with the specific intention of preventing pellagra was the passage of a law appointing committees of experts in the ports of (especially Venice and Genoa) to examine the state of preservation corn arriving from abroad. The corn must be examined twice-first when it is unloaded and secondly when it is discharged from the silos or elevators in which it is stored at the port. Spoiled or unripe corn can be used only for fermentation. Examination of the corn produced in the country is compulsory only, in localities which pellagra cases exist, but has never been carried out in practice. However this corn bears only a small proportion to the total quantity consumed.

"The disease has diminished very rapidly in Italy since 1881, in which year there were reported 104,067 cases. In 1926 there were 1,446 cases. The figures may be relied upon since the families of pellagra cases receive certain benefits from Government. In 1926 there were only 103 new cases reported during the year. The deaths from pellagra per million population are shown for certain years in the following tables.

Year	Deaths per		
	Million		
1898	125	1908	49
1899	119	1909	42
1900	117	1910	38
1901	94	1911	35
1902	73	1914	20
1903	81	1918	18
1904	72	1923	4
1905	71	1925	3
1906	61		

"It is evident that some constant-

ly acting and very efficient cause has been extinguishing pellagra at an ever accelerated rate in Italy, just as is occurring with tuberculosis in the United States. There is no authoritative Public Health official or scientist in Italy who believes that this been due to the condemnation mouldy corn at the ports of entry. A standing commission appointed study pellagra (abolished a few years ago) supported the theory that some dietary deficiency was the predominating factor in the etiology of the disease, and this is in accord with scientific opinion in general in Italy. Lustig and Franchetti, reporting at the request of the above commission on the effect of the World War on the epidemiology of pellagra, came to the conclusion that in localities where the war produced a deterioration in the diet there was an aggravation in the pellagra situation, and where on the other hand the war improved the nutrition of the people there was a diminution in the number and severity of the cases.

"In Italy pellagra is confined to the northernmost region including the valley of the Po and the sub-Alpine provinces. Here the introduction of scienitfic agriculture in the last thirty years, with rotation of crops and increase in cattle and in dairying industries, together with the cultivation of rice on a large scale, greatly improved the economic conditions and standard of living and the diversification of diet of the inhabitants. The prohibition of the sale of spoiled or unripe corn has thus been only one factor in a very complicated situation.

"Finally it may be mentioned that whereas the law went into effect on the 5th of November, 1903, the death rate from pellagra had begun to fall rapidly as early as 1898. From 125 deaths per million inhabitants in 1918, the mortality had fallen to 73 in 1902—a decrease of 42%. In the five

years following the passage of the law the deaths diminished from 73 to 49 per million population—a decrease of 33%. Pellagra has been decreasing at about the same rate ever since.

"The opinion of the Commission (as expressed by Lustig) was that the law of 1903 went into effect when pellagra was in its period of maximum decrease, and that it has probably had little to do with the subsequent disappearance of the disease as a factor in the public health of Italy.

"In conclusion I might say that Italian opinion cannot be said even remotely to support the theory that the etiological factor in pellagra is connected with the spoiling of Indian corn, since even the Public Health Department which caused the passage of the law of 1903 has never claimed any credit for the subsequent regression of the disease."

The significant and serious considerations to the people of North Carolina in the statement of the foregoing figures by Dr. Hackett is the fact that in 1898 the highest figures reported to the government of Italy was 125 deaths per 1,000,000 of population. The seriousness of our situation is that in 1929, according to our population, we had more than three times as many deaths in an equal population.

As the reader may have just noted in Dr. Hackett's letter, the spoiled corn theory as the cause of pellagra was exploded.

A letter from Dr. Washburn later sets forth the following pertinent comments for our consideration here in North Carolina:

"None seems to know exactly what has been the cause of the disappearance of pellagra from Italy. They are all agreed, I think, that hospitalization had nothing to do with it. The facts of the disappearance of the disease are about as follows. It began to lessen about 1900 when the number

of deaths per million was 117, and there has been a rapid decrease since until at present it is not an important cause of death-in 1925 the number of deaths per million was only 3. Pellagra is found only in the northern part of the country-this is the district which formerly imported great deal of corn and this formed the chief diet of the people. About 1895 to 1900 a movement was started to induce the people to raise rice; it was thought that this would largely take the place of corn as an article of food and would enable the country to get along without importing so much corn. The purpose of this movement was economic as, at that time, the country was not too prosperous and much money had to be sent away annually to purchase corn.

"This movement was successful and rice is now grown in most parts of northern Italy. A number of important and unforseen things also happened in connection with the movement. It was found that rice not only proved a good substitute for corn, but also that it was a highly profitable crop. More than this, rice is hard on the soil and in order to grow rice profitably it became necessary to practice crop rotation-plant rice one year and peas and beans the next. This led to cattle raising in order to use up the pea crop profitably. And cattle raising increased the dairy industries and led to the use of milk, butter, and cheese; as well as beans and peas, as regular articles of diet. And with the change of diet brought about in this way, pellagra has decreased steadily."

It will be noted from the foregoing that many theories of pellagra have held sway for the past two hundred years, many theories of origin of cause and concerning treatment. It will be noted from Dr. Washburn's letter that the rotation of crops, the spread of the dairying industry, together with the incident prosperity brought about in that way, and espe-

cially with the radical change in the diet of the Italian population affected, have been the chief causes of eradicating pellagra from the Italian empire. It might be well for the reader to stop here and compare the nearly one thousand deaths which we had in North Carolina in 1929 in a population of three million people with the fewer than forty deaths occurring in Italy in the same year in a population of forty million people.

I may conclude that opinion is by no means unanimous in Italy as to just what are the agencies which have operated toward such a radical decline in the number of people having pellagra in that country, but we would like to especially call attention to one significant statement in Dr. Hackett's summary, to-wit, where the war produced a deterioration in the there was an aggravation in the pellagra situation, and where, on the other hand, the war improved the nutrition of the people, there was a diminution in the number and the severity of the cases. That observation could be literally applied to the experience of North Carolina in the war and in the painful years of deflation along about 1920 and '22 following the war, as well as to the present period of economic depression in this State.

What Causes Pellagra

The most frequent question about this disease is, What causes it? There are many things about the disease and its prevalence which have not yet been satisfactorily explained. We can safely repeat what has become a trite saying, that the United States Public Health Service, and possibly a majority of the practicing physicians of the South, agrees that it is a deficiency disease, and that it is caused by the eating of a one-sided diet. Dr. Edward Wood used to urge every physician in dealing with suspected cases of pellagra to make the utmost endeavor to trace the complete personal dietary history of such a patient back as far as it was possible to go. A large number of physicians believe that there is some special parasitic entity responsible for the disease. A large number of physicians believe that it is caused by a fungoid growth. This coincides with the old Italian theory of spoiled corn.

Today any physician would be a fool to conclude that the last chapter about pellagra has been written. There are too many things which are as yet not satisfactorily explained to encourage a dogmatic opinion about the cause of pellagra. All the agencies in the world, however, seem to be in entire agreement on the point that a general balanced diet consumed every day from early childhood on to the end of life acts as a definite preventive of pellagra. It cannot be said in this country to be strictly a disease of poverty, but it is generally associated with poverty. One reason for that is that there are so more poor people than any class that almost any disease is found to be more prevalent among the poorer classes than others. The disease can be said to be associated with a one-sided diet, be it in the homes of the wealthy or of the extremely poor. Some one has cited the case of a very wealthy old lady who insisted eating nothing except biscuit in sweetened coffee, and in about one year contracted pellagra and died. Naturally every person confining themselves to such an eccentric diet would not develop pellagra every time, nor does every person exposed to tuberculosis infection contract that disease every time on exposure to it. There is probably less known about genuine immunity to disease than about any other factor having a vital part in medical science.

Having made the foregoing declaration, let it be repeated again that all authorities, so-called authorities, and would-be authorities in the world agree that a well balanced diet prevents pellagra. It not only will prevent it this year, but next year, and the year after, and on throughout life. But the diet must be eaten. It must comprise the necessary vitamin elements. The food must be prepared properly, and sufficient attention must be devoted to such matters as rest, sleep, and freedom from worry.

The Governor's Live-At-Home Program

One of the most pertinent moves to obtain popular acceptation inaugurated in the State is Governor Gardner's live-at-home program. Basically, this program is that every family in the State who can possibly have a garden should possess one. If any person is inclined to doubt that this program has been honestly attempted in North Carolina this year, let such a person simply step out of his back door and look around his neighborhood. have never seen such evidence of attention to gardens, and such success accompanying the efforts, as we have observed wherever we have been in North Carolina this year. Naturally there are hundreds and thousands of people who do not have the facilities for a garden, but a majority of the people can have and do have a vegetable garden this year. Vegetables alone will not prevent pellagra, and will not support any family, but vegetables contribute a large proportion of the food necessary to maintain health.

The Dairying Industry

It is coming to be more and more realized that the prevention of pellagra is dependent upon a larger per capita consumption of milk and dairy products. There could be no more important objective for the people of North Carolina than to undertake to double the per capita production of milk and butter, and to double the per capita consumption of the same in North Carolina for 1931. It is essential that production cost be low-

ered as far as possible in order to afford the dairy producer a reasonable living profit and at the same time make for a reduction of the prices of milk and butter to the consumers in the cities and smaller towns. This especially applies to the nearly half million industrial workers in this State.

From a splendid paper presented to the North Carolina Medical Society at its Pinehurst meeting by Dr. Frederick R. Taylor of High Point, we quote the following paragraph:

"The purpose of this paper is not to advance any positive and final theory of the etiology of pellagra, but to emphasize the importance of facing the fact that we have much yet to learn about this very complex subject. I am fully convinced that any theories we may hold at present should be held only tentatively, and that further research is urgently needed before we can consider the etiology of pellagra as finally established.

"Whatever may be the flaws in Goldberger's theory that make many of us unable to accept it in toto, he has made a very important step in the development of the prophylaxis and treatment of the disease. The importance of an adequate diet cannot be overestimated at this time, even if it will not cure all cases. Goldberger has outlined what he considers an adequate menu for the pellagrin which consists of foods readily obtained in the southern United States."

Some Recommendations for Meeting the Existing Situation

1st. To repeat again, there is unanimous agreement that food of the right sort, in abundance, properly prepared and consumed every day by every person, will prevent pellagra.

2nd. For the many thousands of cases of pellagra in existence in the State at the present time, medical supervision is essentially important, as it is absolutely necessary for the morale of the patient to have the

stimulating advice and encouragement of a physician.

3rd. In what way may those two provisions be carried out in order to reach every individual vitally concerned at present in the State?

4th. To repeat again, a first class year round garden is essential where it is possible to achieve, meaning an abundance of fresh vegetables every day in the year. To this vegetable diet milk and butter in abundance, fresh eggs, lean meat and should be added-fruits either dried or canned when fresh fruit is not available. Yet many people cannot have a garden and are not financially able to purchase the necessary foods and to secure the necessary medical treatment. Therefore this writer recommends the following methods:

1st. The organization of a special pellagra commission in every county, this commission to be composed of a committee from the County Medical Society, a member of which should act as chairman; a committee from the women's clubs acting with the county health officer, the county physician, the home demonstration agent, the county welfare officer, and the county superintendent of schools; this committee to endeavor in every possible manner to immediately ascertain the name and residence of every person in the county suffering from the disease in any stage, but making an especial effort to locate those in the incipient stages, and who have not yet consulted a physician; this pellagra commission to undertake to follow methods already under way in at least two or three counties in making an effort to provide and distribute vegetables and milk to all the pellagrins in the county where such patients are not already in position to secure the necessary food.

2nd. A reliable product of dried brewers' yeast, in tablespoonful doses

three times a day, to be made available to every person suspected of having pellagra, this in addition to the essential foods outlined above.

3rd. The commission should make a valiant effort to see that every such patient, as soon as the diagnosis of pellagra is made, has the personal care of a physician. There are many associated conditions and many symptoms which arise, which can only be dealt with by a competent physician. Precious time should not be lost in relying on advertised quack remedies for this serious condition.

4th. The plan already under way in one county, of providing a temporary or emergency hospital utilizing tents, somewhat on the plan of the boy scouts and the campfire girls camps, in which expert supervision of cooking is to be carried on by the home demonstration agent, the medical care assumed by the county physician, or the county health officer, and proper nursing care by a responsible nursing agency, for a period of about six weeks at a time, so that indigent patients and the family attendant when possible may have the opportunity of learning first hand how to cook, feed, nurse, and care for a pellagrous patient, especially in the early stages, so that this information can be put into practical effect when returning home from the instruction course at the camp is practical and should be tried wherever possible. Such facilities, of course, are only practicable to carry out in the spring and summer months, but at least three or four different groups of patients may be taught during this time how to combat the disease.

We simply issue the foregoing as a suggestion, and we hope that it will be undertaken in many counties, if not this year, then early next spring, and continue until such time as pellagra shall be found in North Carolina no more.

"FIRST AID" IN THE HOME AGAIN INTERESTS MEMBERS OF THE YOUNG MOTHER'S CLUB

By SUDIE E. PYATT

There was a pleasant hum of voices in the sitting-room of Mrs. Paul Helms' home, as the ten members of the Young Mothers Club of Crafton with the young woman reporter from the Crafton Herald sat talking of the happenings of the community while they were waiting for Dr. Morton Wright to come to continue his address on "First Aid in the Home" to the members of the club, that he had started when he had talked to the young mothers at their July meeting.

"I tried to remember everything Dr. Wright told us last month, about the only safe way to use household remedies, when to call the doctor, treatments for common illnesses, treating emergencies until the doctor comes and how to restore respiration," Mrs. Ernest Swarts said.

"Yes, I certainly needed what he said about the medicine cabinet," put in Mrs. Kenneth Hill, the wife of the leading druggist of Crafton. "I went home after Dr. Wright's talk, and had a medicine cabinet cleaning. When I finished Kenneth said it looked as if I had been trying to set up a rival drug store. My medicine cabinet is a model now. Just the articles the doctor recommended for the medicine cabinet, and a few others that we have found indispensable.

"If I had not heard Dr. Wright's talk I suppose I would have fainted myself the day that Theodore's sister fainted, when she received the news of her sweetheart's death," Mrs. Theodore Rudolph gravely asserted: "But remembering what Dr. Wright said, I was not afraid at all. Eliza, my good colored maid, and I, lifted her, and placed her on the couch in the sitting-room. Her face was pale, so I placed her head flat on the couch, and

told Eliza to telephone for Dr. Wright. Luckily he was in and in a few minutes after he arrived Marian was all right."

The pleasant buzz of conversation in the living-room died down as the door-bell rang, and Mrs. Helms welcomed the doctor of whom they had all been speaking.

"Good afternoon, everybody," the doctor greeted the room full of young women who had been waiting for his arrival. "And now, young ladies, as I am a bit late, I am going to plunge immediately into my talk. Last month I told you that for this meeting I would touch on the subject of injuries where the skin was and was not broken, foreign bodies in the eyes, ears, nose and throat, injuries from fire, heat exhaustion and heat stroke, electric shocks and burns, poisons, and some precautions the housewife can use to prevent home accidents.

"I have just returned from the home of a farmer out in Hopewell township, whose young son suffered a fracture of one of the bones in his forearm this morning. A fracture, which means broken bones, is usually spoken of as an injury where the skin is not broken. Dislocations, sprains, and strains are all injuries where the skin is not as a general rule broken. If the skin should be broken there is a wound as well as a fracture, dislocation, strain, sprain, or bruise to be dealt with.

"In cases where an injured person has had a blow or a fall, and complains of severe pain at the point, and there is tenderness, swelling and deformity present, a broken bone is practically always indicated.

"If any or all of the indications of

a broken bone are present do not attempt to set the bone yourself, but send for the doctor. While you are waiting for the doctor you may, however, make every effort to keep the broken bone from moving, for if the limb is allowed to move the sharp knife-like edges of the broken bone will do further injury to the soft tissue surrounding it, and cause great pain.

"If you are expecting the doctor soon place the injured limb in a comfortable position on a pillow and leave it there.

"Only as a last resort should a person who is not a physician attempt to set a broken bone. The broken bone is set by putting it in the same position it had before the break occurred, and holding it in that position by the aid of splints. Any rigid thing may serve as a splint, such as a flat board. Wide splints are better than narrow ones, and they should extend well above and below the point of injury.

"In fractures of the skull the patient usually seems stunned and is unconscious. There is nothing that the layman should attempt to do for a person suffering from a fracture of the skull. Send for a doctor at once.

"A dislocated bone is out of place at a joint, and it looks out of place when compared with the same joint on the other side of the body. The average person should not attempt to treat a dislocation any more than a fracture. The best thing to do is put the patient in a comfortable position, treat shock if it is present, and make the patient comfortable.

"Doctor, is a sprain similar to a dislocation?" Mrs. Harold Ziegler questioned.

"In one respect, and that is it is sometimes quite as painful as a dislocation, but it is dissimilar to the dislocation in that no bones are broken or out of place. A sprain is generally due to a sudden turn or pull, which tears the cords that attach the muscles to the bones. Even if the sprain is only a slight one it is best to send for the doctor. If the pain is considerable, by all means have the doctor. It may be a fracture.

"The simplest treatment for sprains is to place the injured joint at rest, and apply cloths wrung out of very cold water for sometime. Prevent motion of the joint, and if the injury is to be a lower limb do not allow the patient to walk.

"Strains are similar to sprains, but the muscles are the parts injured. Rest and light massage will give relief.

'Everyone knows how a bruise looks. Cloths wrung out of cold water and applied to the bruise will bring relief. Treat a black eye with cold water applications as you would a bruise on any other part of the body. A black eye may become serious, so it is best to take it to a doctor for treatment.

"Injuries when the skin is broken we call wounds. The greatest dangers from wounds are homorrhage and infection. Hemorrhage in most wounds is slight, the danger of infection from wounds, even in the smallest pin pricks, is always present.

"If infection develops from a wound the patient may be very seriously sick.

"In preventing infection from a wound nothing but a piece of clean white cloth, which has been sterilized, should be allowed to touch the wound. You should have on hand in your medicine cabinet dressings of sterilized gauze. If not boil a piece of clean cloth in water for 10 minutes to sterilize it.

"Use pure soap and clean water that has been boiled and allowed to cool to a comfortable temperature to cleanse the wound. After cleansing the wound paint the surrounding flesh with tincture of iodine and apply a few drops to wound if the wound is small. Mercurochrome is less irrritating than iodine and may be used instead of iodine. After cleansing and placing the antiseptic on the wound cover it with a sterilized dressing that has come in contact with no other object and secure the dressing with adhesive tape. If the wound is more than a very small flesh wound, consult a doctor at the earliest possible moment.

"The danger of tetanus poisoning, or lockpaw, is greatest in small, deep wounds caused by rusty nails, wire and splinters. Do not try to suck such a wound, and poke iodine down in the wound. It will only make it worse. Take the person suffering from the wound to the doctor as soon as possible to prevent the development of tetanus.

"In hemorrhage from wounds there are three kinds of bleeding: From the fine capillaries blood comes slowly, and is usually stopped by pressure of dressings. Blood comes slowly from most of the veins. If the arteries remain open, much blood may be lost in a short time. It is most difficult to stop bleeding in the veins of the neck and legs. Put the fingers on the bleeding point, and press vein to stop bleeding. Keep the fingers on the bleeding point until the doctor arrives.

"Send for a doctor at once in case of bleeding from varicose veins. Before the doctor comes lay the patient flat on his back and raise the leg so it is at right angles with the body. Remove all bands from around the leg, and place a dressing of sterilized gauze firmly in place over the bleeding part.

"Bleeding from the arteries is most serious. If the stream of blood is a small one the pressure of the dressing may stop it. If a great deal of blood is being lost a tourniquet will stop the bleeding. Pressure on a small artery from which blood is being lost will stop the flow of blood. The pressure is first made with the fingers, then with a tourniquet. The tourniquet should be quickly and tightly applied. It should be placed between the wound and the body and applied tight enough to stop all hemorrhage. Any kind of strong cord or strip will make a tourniquet.

"In cases of bleeding from the arteries, just as in cases of bleeding from other wounds, send for a doctor immediately, but do all that you can safely do to stop, or check the bleeding before the doctor arrives."

"Oliver and Harry cause me more concern getting foreign bodies in their eyes, ears, nose and throat than any other one thing," Mrs. Theodore Rudolph gave Dr. Wright an opening for the next part of his talk, which was on foreign bodies becoming in some way lodged in the four organs of the body that were most likely to become the lodging place of such objects.

"Splinters, pieces of clothing and gravel, which are most likely to become lodged in the orifices of the body, carry germs with them which cause infection. If foreign bodies get into the eyes do not rub them. Close the eyes and the tears may be sufficient to wash out the object. A wash with clean water, or with boracic acid solution will sometimes remove the object when the tears fail.

"Next, you may pull the upper lid down over the lower, seizing the upper eyelid as you do so. If the object is on the lower lid, pull the lid down gently, and remove the speck with a clean handkerchief. If the object is on the lower lid, pull the lid to remove the object yourself, but go to the doctor, and take the person who is suffering with the foreign body to the doctor. A soft cloth, soaked in cold water and placed on the eye will aid in lessening the pain. If

there is any injury to the eyeball send for the doctor.

"When children place objects, as they sometimes do, in their ears, do not attempt to remove them yourself. You may do serious permanent injury to the delicate ear drum. Send for a doctor, or take the child to a doctor, and have the doctor remove the object. Should an insect get into the ear place a few drops of sweet oil in the ear, but do not attempt to remove the insect yourself. When the doctor comes he can remove the insect and wash out the ear to remove the oil.

"Do not try to remove wax from the ears by the use of sharp instruments. This practice is likely to result in making a hole in the ear drum, and causing partial or total deafness. A wash with warm water used in a small rubber ear syringe is a good way to remove accumulations of wax.

"Should foreign bodies become lodged in the throat of a child, or an adult, it is best to send for a doctor. You may safely hold the child upside down by the heels and slap him vigorously on the back in the hope that the object may fall out. In doing this be careful that the child is not held by the heels too long, and that the slaps are not too vigorous. If this method fails better wait for the doctor before making any more efforts to remove the object.

"A child who has swallowed some article like a coin or a safety pin should be fed mashed potatoes, and bread or bananas as much as possible for a day or two, and the stools should be watched until the object has passed from the body. If not passed the doctor will advise an X-ray examination.

"Objects in the nose of a child may be removed by the mother, or nurse, if the object can be seen, and only a little force is necessary to remove it. "How to handle a fire and how to treat burns and scalds and sunburn are the most important things to know in first aid measures about fire. When fire starts in a room promptly close all windows and doors to prevent a draft. Give the alarm at once. A rug or a blanket will often smother a fire. If a person catches on fire lay him on the floor and smother the flames with a heavy coat, blanket, or rug, if no water is handy.

"All burns, covering more than a minute surface of the body, require a physician. Until the physician comes, stop the pain by protecting the burn from the air. A paste made of baking soda and water may be used to keep the air away from the burn. Put this substance on the burned part, and cover with a piece of cloth, or bandage. All burns should be considered as infected wounds.

"Sunburn is like any other mild burn and should be treated accordingly, baking soda and water, and cold cream are all good helps to lessen the discomfort.

"Heat exhaustion, and heat stroke, or sunstroke are two separate conditions and require different treatment. In both cases it is better to send for a doctor at once, particularly in heat stroke, or sun stroke, which is generally more severe than heat exhaustion.

"For heat exhaustion, usually rest in a cool place is sufficient. For sunstroke loosen tight clothing, and remove to a cool place is sufficient. To reduce the temperature, which is always high in sunstroke, cool sponges, cool sprays, ice-water packs and ice may be necessary.

"The first problem to handle in treating a person suffering from electric shock is to remove the person from contact with the live wire, and to do this without the person aiding the one already shocked, from becoming shocked. If near the power house the current may be turned off

and the person safely removed from contact with the wire. If there is no way to have the current turned off the rescuer may grasp the shocked person's coat if it is dry and drag him away from the wire in that way, or a dry wooden stick may be used to remove the wire. While doing these things the rescuer should stand on a dry board, or a folded dry coat or newspapers, and should wrap his hands in several thicknesses of dry cloth or newspapers.

"Treat electric burns as any other burns would be treated, when the patient has recovered from shock. In any electric burn send for a doctor.

"Doctor, what are the most frequent causes of poisoning?" Mrs. Lester Patterson questioned the doctor, after the members of the club had made comments on shock and burns.

"Gas poisoning, chemical poisons from foods and drugs, poisoning from animals, snakebite, dog bites, insect stings, and ivy poisoning are the most frequent sources of poisoning, which are dangerous to the average child or adult," the doctor answered Mrs. Patterson's query.

"The most common cause of gas poisoning is illuminating gas." went on. "Carbon monoxide present in illuminating gas, and in the exhaust from automobiles is one of the most serious causes of fatalities from gas poisoning. An automobile in a small closed garage will soon fill the air with enough carbon monoxide to kill a man, if the engine is running. An engine of an automobile should never be run in a small garage without as many windows and doors as possible being open in the garage.

"Gas cook stoves, leaky gas tubes, loose gas fixtures and valves, furnace gas, gas heating stoves, and water heaters, should all be properly adjusted, and connected to flues.

"Treatment of the person suffering from gas poisoning consists in getting him into the open air, and sending for a doctor.

"Very sudden and severe illnesses with vomiting and bad cramping pains, are indications of poisoning. Send for the doctor at once, and if you can let him know what poison has been taken so he may bring the proper antidote. In cases of poisoning vomiting is the best means of ridding the system of the poison. Mustard and water, salt and water, or syrup of ipecac are all good emetics. Do not worry about the dose, but give it promptly.

"Do not delay in cases of snakebite. Get at the wound by cutting the clothing if necessary, and immediately tie the limb between the wound and the heart with a tourniquet made of a handkerchief, piece of cloth, or anything available. Send for a doctor. A small, clean pen-knife, which been held in a flame may be used to enlarge the wound causing it to bleed freely. After the tourniquet has been on for fifteen or twenty minutes it must be loosened gradually. After loosening for a minute tie the tourniquet for a few minutes, and again loosen and so on. In the meantime get the doctor.

"Dog bites in which hydrophobia is suspected, should be cauterized deeply with fuming nitric acid as soon as possible. The Pasteur treatment should later be given the patient. The services of a good physician should be procured at once.

"Many people kill a dog as soon as it bites a person. It is best not to do this, but catch the dog and take him to your county health officer. The health officer will observe the dog for fourteen days, and if no symptoms of rabies develop he is probably not mad, and there is no danger of rabies infection from the wound.

"If the dog is thought to be mad

when it bites the person and if it has been killed, cut the dog's head off, pack it in ice, and send it immediately by express to the State Laboratory of Hygiene, Raleigh, N. C.

"Ammonia water, and cloths wet in cold water, are the methods of treating insect stings.

"Wash off the parts poisoned with poison ivy with soap and water, and put on a dressing kept soaked in a cold soda bicarbonate solution. Consult your doctor.

"As a conclusion to my two talks to the Young Mothers Club of Crafton I want to again impress upon you," Dr. Wright asserted, "the importance of immediately getting in touch with a doctor, if this is at all possible in cases of accidents. These talks on first aid have not been made with the idea of supplying you with information that may be used to save the trouble of calling a doctor. The information has been given you with the hope that it will enable you to know how to treat emergencies until the doctor comes, and to recognize symptoms of the common diseases, and the nature of injuries to the body, the safe removal of foreign bodies from the orifices of the body, the handling and treatment of fire and burns, and the treatment of different kinds of poisonnig.

"As she goes about her daily work in the home, the house-mother can do much to prevent accidents by taking a few precautions.

"These precautions I want to leave with you as the conclusion to my talks.

"First, rocking chairs and pieces of furniture that do not stand firmly on the floor are not substitutes for a firm, strong ladder.

"Second, well lighted stairs, kept cleared of articles will save members of the family from many accidents,

"Third, sand and ashes sprinkled on icy steps will do likewise.

"Fourth, many a mother's heart would be saved the anguish of seeing her little child suffering from the pain of scalding burns if kettles of hot liquid are kept out of the reach of tiny hands and arms, and if children are never allowed to carry them.

"Fifth, a metal container for matches will save children from burns, and often the family from having to suffer expensive fire losses.

"Sixth, naphtha and gasoline should not be used in the house.

"Seventh, keep clothing away from a hot stove.

"Eighth, do not touch broken or sagging wires. It may be a live wire.

"Ninth, defective electric fixtures should be left for the electrician to handle.

"Tenth, gas burners turned low and left burning all night may be the cause of another 'asphyxiated by gas' case.

"Eleventh, look well to the tubes of your gas stoves, and make sure that they do not leak, and that all fixtures and valves are tight.

"Twelfth, a gas heater that is not connected with a flue should not be used in a closed room.

"Thirteenth, label bottles containing poisonous drugs, 'Poison,' and keep them locked away. Read the label before taking the contents of any bottle.

"Fourteenth, boards containing nails, tin cans, or any sharp-edged object should never be left lying about.

"And now members of the Young Mothers Club of Crafton, this concludes my talks on first aid in the home," Dr. Wright said as he gave the last of the fourteen precautions. "It has been a real pleasure to meet with you, and to give the talks that I have to the club. If at any time in the future I can help the Young Mothers Club in any way, please do not hesite to call upon me."

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Pre-school Clinic, Long School, Concord, N. C., May, 1930, Cabarrus County.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Eyes Flies Fly Placards

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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West) "Our Babies"

Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care What Builds Babies?
Breast Feeding
Sunlight for Babies

Hints to North Carolina Mothers Who Want Better Babies Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).
Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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LABORATORY FINDS IT NECESSARY TO MAKE A SMALL CHARGE FOR DIPHTHERIA TOXIN-ANTITOXIN

The following letter, which Dr. C. A. Shore, director of the State Laboratory of Hygiene, has recently issued to the medical profession of North Carolina, will be of interest to most of our readers of the Bulletin. The letter is self-explanatory and needs no further comment from the editor of the Bulletin.

"To the Medical Profession of the

State of North Carolina.

"Dear Doctor:

"On account of the twenty per cent cut in all appropriations for the year 1930-1931, it has been found necessary to discontinue the free distribution of diphtheria toxin-antitoxin.

"Beginning August 1, 1930, this vaccine will be distributed only by sale—the 3cc vials at twenty cents each and the 10cc vials at fifty cents each.

"We expect to be able to provide the toxin-antitoxin for all of the county campaigns already arranged for with the State Board of Health. For later campaigns it will be necessary to buy the vaccine at the above price. In those counties where no funds are available it is hoped that they may reimburse themselves by charging twenty cents to each person receiving the vaccine.

"The laboratory regrets very much this change in procedure as we believe that the State should encourage immunization against diphtheria in every possible way. The charge, however, is an absolute necessity and we hope, with this exception, to continue the other services of the laboratory.

"Until August the first we will continue to distribute the vaccine without charge, but the doctors are respectfully requested not to lay in a supply of free vaccine for vaccinations to be started after that date.

Very truly yours, C. A. SHORE."

SYMPOSIUM ON CHILD HEALTH

What Some Localities Are Doing For the Health of Their Children

Beginning on this page we are publishing some very interesting reports describing what some of the health departments and schools have done for the health of children during the past year. It may not be quite so interesting to some people to talk about jobs that have been done as it would be to enlarge on things in prospect. In fact, we believe the average newspap-

er editor does not regard reports of work accomplished as even being news. What most of them want is speculation on the future. We therefore take pleasure in demonstrating again that we are not much of an editor by stubbornly insisting that we are not even interested in what somebody is "going to do." The reason is because nine times out of ten it is never done. We are interested in and about the job that "has been done." Do it and then talk about it is our platform. We are publishing these reports in our September issue, which is always our school number, because it will serve to sharply accentuate the necessity for getting school children physically prepared for school during the summer. It will also stimulate other sections to make plans right now for carrying out these measures for young children early next spring.

We are publishing these selected items from the sections mentioned because they sent their reports to the editor of the Bulletin for his consideration at this time. There are many other counties and cities we feel sure that have carried out fine programs this year but which have not been reported to The Bulletin. To all such we cheerfully send our enthusiastic encouragement. We herewith present some of these reports in the order in which they came to us.

Edgecombe Gets Operations Done

In most of the counties of North Carolina the physicians cheerfully cooperate with the health officer when asked to do so. In counties where there are hospitals and operators it has been easy for the health officer who desired, to perfect arrangements for operations for school children and pre-school children, with such hospital staffs. While the physicians and hospitals are willing to do all they can to help out, they cannot open their doors and offer their services at any and all times and to any and everybody. It remains for the health officer to formulate the plans and to carry out the details of any arrangement if it is to be successful. As an example of fine spirit and co-operation in this kind of work the methods adopted by Dr. R. E. Broadway, health officer of Edgecombe, might well be emulated by other local health officers. Dr. Broadway first worked out his plan and presented it at a meeting of the Edgecombe County Medical Society with every member except one present. Dr. Broadway made it his business to see the absent member and get his assent to what was done.

Briefly described, the medical profession and the local hospitals at Tarboro agreed to admit on two days in each week to the hospital any child expecting to enter school the following fall, and any school child who had not passed its 13th birthday, for tonsil operation. The fee to be charged was \$15.00, which covered medical, surgical and hospital care. For any child financially unable to pay anything a certificate from the county welfare officer was sufficient to secure free treatment. The period was limited to about two summer months and specifically to school children and pre-school children, and, to repeat, to two days of each week. It is a practical, fair arrangement and one which assures an operation for every child in the county needing it. It is hardly necessary to add that an additional requirement was that the county health officer must have previously examined the school children and the parents must have promptly made application in writing for the operation following Dr. Broadway's examination. It is a working plan, as illustrated by a photograph of one mother who had her six children operated on under this arrangement. The work was successful last year and the medical society approved its continuance this year. In describing this enterprise it is a pleasure to state that the Edgecombe county health department has a sympathetic friend and wise counselor in Superintendent W. H. Pittman and the county educational forces.

Report of Cabarrus County Pre-School Clinics and Special Health Project in One of the Rural Schools of That County.

We know of no county in North Carolina that has been carrying on more interesting developments of interest to health department workers during the past year than Cabarrus. Dr. D. G. Caldwell, health officer of that county, was instrumental sometime ago in procuring subscriptions totaling nine hundred dollars for a three months' extension of the State Board of Health dental clinics in that county. The subscriptions were obtained from a number of different agencies in the county, and it will mean a great deal to the advancing cause of oral hygiene in that section. Dr. Caldwell has sent us a most interesting article describing a health project developed in one of the rural consolidated schools of Cabarrus County this spring. The material was prepared by Dr. Caldwell from the

teacher's written report of the project. It is so interesting that we herewith quote in full:

"Through the awakened interest of the boys and girls, and under the fine guidance of the teacher, Mrs. W. L. Harris, an unusually complete health project has been developed in the Harrisburg School in Cabarrus County this spring. The class whose project is described is a fourth grade in a rural consolidated school.

"Interest was aroused in the health of the class and school by reading 'Boys and Girls of Wake-Up Town. After this book was completed, several others were collected from various sources, health pamphlets were used, The Health Bulletin, and many of the booklets from the State Board of Health on the prevention and care of different diseases were read and discussed. The children were greatly interested in finding new material, and not only brought anything they could find at home but borrowed from friends and neighbors whenever pos-

"Many other subjects were easily correlated with the health activity. Paragraph writing on such subjects as 'The Cleanliness of Other Countries,' 'Good Health Habits,' etc., readily found a place in the English lessons. The new vocabulary needed sent the children flocking to the dictionary, and many new words crept into the spelling lessons.

"For about two weeks, the entire arithmetic period was devoted problems related to health.

"The drawing period was used in making health posters, and some very creditable designs were worked out.

"A study of the health and cleanliness of various countries fitted into the geography schedule, and Holland and Japan served as shining ex-

amples.

"Civic pride was developed among the entire class. Bathing facilities in the rural and city homes were studied, and a survey was made of the number of homes having electric lights The and running water. children looked for and destroyed breeding places for flies and mosquitoes. Homes and public buildings were observed to see which were cleanest. An interest was aroused in keeping the Clean-up days were observed, and the classroom and the school grounds clean and orderly. A student board of health was organized, consisting of a doctor and a nurse who attended to cuts or bruises received at school.

walls, woodwork, blackboards and windows were washed, the school grounds were cleaned up, and flowers were planted.

"The subject of play and exercise called for the arrangement of an ideal playground on the sand table. Small models of see-saws, swings, slides, merry-go-rounds, etc., were made by the children, and a small rock fish pool was constructed of putty and pebbles in an old pan. The interest in this activity led to cleaning up a small grove on the school grounds for the playground for the elementary grades. Here several benches have been built. The children themselves have constructed a lily pool and have raised money and bought a slide. Other equipment will be added as fast as possible.

"Another class activity was the writing and presentation of a health play, 'A Sad Accident.'

"But the outstanding classroom activity of the whole project was the hot lunch program, which has produced unusually gratifying results. The children were interested from the start and their enthusiasm quickly enlisted the cooperation of the parents. Many parents became as enthusiastic as the children when the merits of the plans were demonstrated.

"The equipment used was very simple. The children brought cups and spoons from home, and used an electric hot plate for cooking. All dishes and utensils were kept in a curtained cupboard and washed each day before and after using. Hot cocomalt, vegetable soup, potato soup, potatoes and beans have been served. The children furnished practically all the necessary ingredients for each day's menu, rotating from time time. After the program was once well started, the children were able to make most of the plans, prepare the food and serve it. Duties of preparing, serving and cleaning taken by different children in turn.

"The benefits of this hot lunch program have been two-fold. Every child in the class, with one exception, has made a substantial gain in weight. A classroom weight graph has demonstrated plainly the steady gain. The group was weighed each month and interest in the weighing has

"Also, this group has focussed the attention of the whole school on the advantages of the hot lunch. A nurse experienced in nutrition work was asked to talk before the Harrisburg Community Club on the subject of the hot lunch. With the interest of the school and community aroused, it seems probable that this little fourth grade nutrition program may have big results. Plans are being considered for serving the hot lunch through

"Altogether, the results of this project have been all that could be desired. It has proved to be a well-rounded development for the children. They know more about the laws of health and their practical application: the members of the class have increased in weight steadily; they have gained a knowledge of foods, their preparation and serving; their social life has shown great improvement through improvement of personal appearance and eating habits; their civic knowledge and interest has been greatly increased through study of desirable surroundings. The experience gained in developing this project should be of much value to the children in the years to come."

Cabarrus County conducted for several weeks last summer a preventorium for children who had reacted to the tuberculin test for tuberculosis and, upon examination, indicated the presence of that disease. The work was so successful that another similar period has been provided during this present summer. Dr. Caldwell also sends us an interesting summary of the pre-school clinics held in Cabarrus County this spring which we feel sure would be helpful and interesting to other sections of the State, and so we close this summary with the excellent work being done in Cabarrus County by quoting from Dr. Cald-

well's report:

Report of Cabarrus County Pre-School Clinics

"Pre-school clinics were held in three schools in Concord, three schools in Kannapolis, and the six consolidated schools in the county. The small one-or-two-teacher schools were not reached. No colored schools were included. The total number of schools visited was twelve, and the whole number of pre-school children examined was 390. These examinations were made by the health officer, assisted by the county nurses and by Miss Edna Oliver, from the Bureau of Maternity and Infancy. In all cases the Parent-Teachers' Association was in sympathy, and in some schools furnished splendid assistance. The school authorities were very generous with their time and effort.

"School officials estimate that in those schools where the clinics were held about 1,390 beginners will enter next fall. That makes about 28% who came for the check-up. In the entire 29 white schools in the county, 1,990 entrants are expected, and the number of children examined represents about 20%, or one-fifth of this total. This does not seem a satisfactory percentage, but it does show a considerable gain in interest and understanding of the value of the preliminary examinaiton when we consider that last year only 184 children were brought to the round-up, as against 390 this year. This is a good index to the increasingly favorable reaction to continued health education in our county.

"Two hundred and eighty-three children were found to have physical defects. That makes nearly 73% needing corrections of some sort. An itemized account of the defects found follows:

Defective hearing	5
Defective vision	25
Diseased tonsils	174
Defective teeth	_148
Heart defects	12
Orthopedic defects	
Nutritional defects	94
	8

"In the six largest schools included in the check-up, a majority of the children come from mill workers' homes. Unfavorable hygienic conditions and a lack of understanding of the simplest rules of nutrition and health probably account for the large proportion of defects, especially in teeth and nutrition.

"We have not yet been able to check up on corrections done. The nurses are making follow-up visits as fast as their other duties allow, and it is hoped that a call will be made to each home where advice is needed, during the month of June. We also hope to secure a tonsil clinic to take care of many of the poorer cases.

"The clinics revealed a good many interesting cases. Probably the outstanding one is that of Paul, a boy eight years old, who had never attended school. He was eight pounds underweight, had evidently had pellagra for some time, and presented a pitiful picture of poverty and neglect. His tonsils were not bad, but he had three defective teeth and was slightly cross-eyed. He was tuberculin tested at once, and the reaction was

negative. He was suggested as a possible candidate for the summer Preventorium put on by the local Tuberculosis Association; so a chest x-ray was made at the sanatorium as a matter of routine, but this was also negative. His teeth have been put in good

condition by the State dentist.
"On June 3rd Paul was admitted
to the Preventorium. Although he does not at present show symptoms of tuberculosis, his nutrition and general condition are so poor that it is felt that building him up will be a real public health service, by warding off a potential case. Three months of good food and a sensible routine of rest, cleanliness, air and sunshine ought to give Paul an entirely new foundation for health and happiness.

"Another child, in the group of defective cases discovered, is already under treatment at the Orthopedic Hospital at Gastonia for an uncorrected fracture of the forearm.

"We feel that the educational side of the clinics was decidedly worth-while, as each child's condition was discussed with the parent, if present. If no parent was in attendance, a notice was sent home with the child as to how he compared with the normal child at his chronological age, Quite a large amount of health literature went into the homes, also, as a by-product of the clinics."

Inspiring Report From Winston-Salem

In no city of a hundred thousand population or less in the country anywhere within our knowledge is there a finer conception of health education than that held by the health officials of Winston-Salem, North Carolina. The record of work which has been done by both the city and county health department in Winston-Salem and Forsyth County during the last few years has been a really inspiring piece of work. Winston-Salem is fortunate in having two excellent newspapers, a morning and an evening paper, under the same editorial management. The editor, Mr. Santford Martin, is intensely interested in public health work and probably devotes a greater proportion of his editorial and news space for advancing the cause of public health than any other large city daily in the State of North Carolina. Dr. R. L. Carlton, the city health officer of Winston-Salem, constantly presents to the citizens of that place some very attractive literature emphasizing the positive character of public health work. We have just received a most interesting letter from Dr. Carlton describing briefly the efforts of his department with especial reference to the pre-school clinic work undertaken in that city and county this year. The description is so interesting, and the results so gratifying, and the sample of newspaper cooperation so very effective, that we feel sure Dr. Carlton will not object to our reproducing a part of his letter here.

"We sent to the parents of children thought to have those who would enter school for the first time this fall the folder entitled 'Is Your Young Child Ready for School,' This folder was sent out by children of the schools. Then later when we had a list of the parents who have children who are to enter school this fall we mailed under first class postage the pamphlet which is really a letter ensage to Parents' and so on, asking them to return to us a filled-in card stating where they would take their child for examination and when, The plan is working very well. We are examining so far practically double the number of children we examined last year.

"Regarding the newspaper publicity concerning this proposition, would like to say that the health department conducted pre-school clinics before schools closed this spring and carried an enormous amount of newspaper publicity regarding them. When our clinics came on, after schools had closed, it was the feeling in the office here that the newspapers were tired of this material—that they had carried practically the same line of thought for the county schools and we hesitated to send our material to the papers for publication. However, we did. We sent them one article after another, we sent them the rehash of a radio talk on this subject, and every article we sent was issued under good bold headlines; and then a few days ago after we thought the subject had been exhausted the Sentinel had a leading editorial at the top of the column concerning pre-school clinics. This editorial is clipped and sent to you for your information. We are happy over the cooperation our newspapers willingly and freely give us. We think our health program would not progress with anything like the satisfactory speed it makes if it were not for the help we get through these paThe following is the Sentinel editorial on pre-school clinics mentioned in the foregoing letter by Dr. Carlton:

"The City Health Department is conducting pre-school clinics for children who are entering school this fall, for the first time. These clinics are being held in various schools, so that they will be convenient to all

parts of the city.

"Parents of children who are beginning their school careers are being urged to bring the little folks to the clinics. The children will be given thorough physical examinations and if any defects are found, they will be reported to the parents. Remedial or preventive steps will be suggested by the physicians and parents will be advised to have the necessary attention given at once.

"If the children are treated during the summer, it is highly probable that they will be in good physical condition by the time school opens and thus they will not be likely to lose time from the schoolroom. The clinics were held last year for the first time and reports showed that a great amount of pre-school work was done, with the result that many children were able to put in full classroom time, when otherwise they probably would have had to be absent, receiving the necessary treatment.

"Parents whose children are just ready to enter school would do well to have the tots examined at these clinics and then give them the required attention, as reported by the

health officer."

As a sample of an effective appeal to parents of very young school children and prospective school children, we quote the following attractive letter, written by Dr. Carlton to the parents of his city having children to be entered into school for the first time this year Dr. Carlton's letter follows:

"Dear Parent:

"School is the child's first job—and it's a man's size job for the small boy or girl. New surroundings, new ideas, new companions, new responsibilities! They need to be fit for it.

"You'll take care of the new clothes, the books and all the rest. But what about the teeth? The adenoids? The weight? The heart? The lungs? Are you taking a chance on those?

"In many cities, Parent-Teacher Associations, Health Departments, Schools—are offering physical examinations of children just before they enter school. This is so parents may be informed of the state of health of their children—and may correct whatever is wrong, before the child tackles his first job—getting an education.

"There are some things about that child of yours in which the Winston-Salem Health Department and you are interested. Because of this interest, arrangements have again been made to hold pre-school clinics by school physicians and nurses at the several schools of the city in June

and July.

"You are urged to have a physical examination of your child who will enter school next fall. Take him to one of these clinics and talk over with the doctor his physical condition. Your child will be weighed, measured, eyes and ears tested, lungs and heart examined, teeth carefully gone over and so on. A careful physical examination will be made and at the end, if nothing is found wrong—so much the better. If there are defects they may be corrected before he starts to school.

"You will find on the last page of this folder a list of the schools where these clinics are to be held and when. Many parents took their children to these clinics last summer. You are urged to bring your child on one of the days mentioned for the school he is to attend, to that school building and confer with the school doctor con-

cerning him.

"In order that we may know about how many children to expect at each clinic will you please fill in and return to the Health Department the card enclosed with this folder? Your youngsters, with all life ahead of them, deserve the best chances for health you can give them. We want to

help you.

In addition to the foregoing letter sent to parents, Dr. Carlton has sent out another most attractive folder with beautiful illustrations, the closing paragraph of which is composed of three sentences urging parents to have their children ready for school in September, 1930, by, first, medical examination and defects corrected; second, successfully vaccinated against smallpox; third, protected against diphtheria by toxin-antitoxin.

Grade Teacher Puts on Novel Program in Nash County

Doctor E. A. Branch, director of the Bureau of Oral Hygiene of the State Board of Health, brings to the editor of the Health Bulletin the article published below, descriptive of a first grade schoolroom project carried out by a teacher in a Nash county school. Dr. Branch, in his work about over the State, became interested in this project and asked the teacher to write it up. It is almost too good to be true. It illustrates perfectly what can be done in any section of the State where the teacher and the right kind of people as patrons of a school come together in a determined effort to depart from ordinary routine in order to improve the health of the pupils. Following is the teacher's report exactly as she has sent it in. We hope every first grade teacher in a rural school in North Carolina will read this story.

How Our First Grade Cow Helped in Teaching Health By Mrs. C. Parker Poole, Teacher Benvenue School, Nash County

Every first grade teacher may well wish for a more nearly ideal world than the present, for not until that time will all parents see that their children have had a full measure of health care and personal understanding before they enter school. that time comes it is exceedingly necessary that the teacher realize that her job is most important, even thought very difficult. At this point in their lives, the children need help not only in forming good health habits but also in changing or breaking the bad ones that are often of several

years standing. On the first day of school, September the ninth, thirty-seven parents either sent or brought their little six year olds to my room to enter school for the first time. For many of these new clothes had been made, and they had been made to understand that they were to get along without home and mother for the first time. Out of this number twenty were underweight-from two to eleven pounds. This fact had not seemed to have made so deep an impression on the parents as it did on me. Eleven had four plus tonsils; eight more had three plus; one could see from only one eye (a fact which the parents of the child had not discovered); one boy who was starting in the grade for the fourth time could not see anything at all from any seat in the room, to even the closest board space, due to crossed eyes; nearly half of them needed dental treatment; and one little boy had two hemorhages within the first month of school. These were some of the conditions which I found to be true from personal observation and doctors examination. But according to contract I was to teach those children to read, write, and learn to work independently.

After nearly one month's work with these little folk studying health stories, writing health rhymes, and making health posters, we decided to check on our own health habits. We did this for several days and found that less than one-third of the children were having milk, more than half were drinking tea and coffee, only ten were getting the right only ten were getting the right amount of sleep, and less than half were brushing teeth or even had tooth brushes. These facts started our cam-paign. The group decided on the ten health rules they felt were most important. Each child received a new chart each week, and a check made at the close of each day. rules as developed by the children were:

Sleep in open air eleven hours each night.

Drink milk every day. Brush teeth every day.

Eat vegetables and fruits day.

Drink four glasses of water every day.

Warm bath on Wednesday and Saturday.

Bowel movement every morning. Wash hands before every meal. Keep hands away from mouth. Play outdoors every day.

These rules or standards were possibly not ideal, but they were the decision of the children, after lots of study and changing. They were a long step forward for them.

Many means were used to make it more easy for them to be put into practice. We sent numerous letters to parents. Parent meetings were held in the first grade room when the mothers were asked to make talks along this line. Of course the material for these discussions was made available by the teacher. Parents were asked to help the child check on Saturday and Sunday, as the other checking was done at school. They were visited, every one of them, and asked to help in many ways, especially in providing tooth brushes and assisting with baths. Each parent was asked to send a small mayonnaise jar filled with some kind of vegetable, soup or cocoa, in the child's lunch. This they did very gladly as they found it to

be cheaper and easier than preparing several sandwiches. These vegetables were placed in a large vessel with a small amount of water, over a hot plate. At lunch time they were hot, thus providing children with a hot dish for lunch, and also making more sure that they were eating vegetables. We helped establish the habit of hand washing before meals by doing it in our room every day before lunch. Our lavatory facilities were not at all adequate for the first graders, so we purchased a large oil can to hold liquid soap, a gallon pot with funnel attached for the water, a ten quart bucket to catch the waste water. The soap and paper towels were furnished by the school. With the help of three captains-one to squirt soap, one to pour water, and one to hand paper towels-we soon learned to have the handwashing for every one in the room in four minutes. Of course the captains learned that they must have everything in readiness for us at the right time.

The biggest problem was that of drinking milk. Was it right to score them down, when they could not get milk? We solved that problem by asking the Parent-Teachers Association to furnish half of the cost of a half pint of milk each day for each child. We told them we would furnish the other half. This they gladly did. For a few months we bought the milk at greatly reduced prices from one of the very best dairies. Even at reduced rates, the bills began to grow larger and larger both for the teacher and the Parent-Teacher Association. It was then that the grade mother and the teacher decided to rent a tested Jersey cow. The teacher furnished the rent and part of the feed, and the grade mother and Parent-Teacher Association furnished the rest. The grade mother kept the cow and tended to the milk. It was sent to school each morning on the school truck. One of the little boys took charge of it. This method reduced the cost from sixteen dollars per month to seven, as the grade mother got enough milk to pay her for the feed she furnished.

Each morning at ten o'clock, just after our outdoor play period, the captain of each table acted as hostess, and served the milk. Other captains—as dishwashers—cleared the tables, and washed and scalded the cups, pitchers and bottles, and put them away. Our first grade kitchen became a very popular place, and afforded

many opportunities for teaching cleanliness and sanitation.

The results of such efforts are never entirely visible. There were, however, many visible results from our year's work centering around improvement. By actual weighing and measuring at the last of school we found that we had reduced the underweights from twenty to two. Those two gained three and four pounds respectively, but had started the year nine and eleven pounds underweight. During the year we enrolled forty-nine, seventeen of which were repeaters. At the close of school there were only six repeaters left for year's first grade. Ninety-one year's first grade. Ninety-one per cent of the average daily attendance was promoted, and eighty-four per cent of the average monthly enrollment. During the year the class suf-fered a shift from one school to an-other of twenty-three. This made the percentage of promotion even harder to attain.

Now that the school is out, we are having a clinic, at which every underweight child in the school will be examined, and if the case warrants it, they are to be placed in a rest camp for the summer. We also have promises that these bad tonsils will be removed before another school year. Several charity cases are getting tonsils removed free of charge.

The entire commencement program for the elementary grades was a health pageant, worked out and presented by the children and teachers, with all the children of the school taking part.

Other visible results were in the very appearance of the children, personal care of their bodies. The idea of heating vegetables and hand-washing in the room became very popular, and nearly every grade in our elementary school was given a hot plate by the grade mother. All the grades, even the high school grades, used the method for handwashing.

School became to those children more nearly a "school home," where we tried to live health together, rather than just to teach and talk health.

Having taught the fifth, sixth, and seventh grades in previous years makes me realize that a child who has needlessly fallen behind in the early school years suffers from a sense of failure from which he will not recover. It is, therefore, much better to remove handicaps at the beginning of a race, than after it is partly run.

EVERYDAY PRACTICE MAKES GOOD HEALTH HABITS FOR SCHOOL CHILDREN

By SUDIE E, PYATT

"Bennie, didn't you brush your teeth this morning?" Daisy Miller, teacher of the third grade at Mount Carmel Consolidated School, asked in a distressed voice of one of her little

boy pupils.

"No'm," Bennie grinned cheerfully, showing a set of nine-year molars. that were far from being what the teeth of a nine-year-old boy should

be.
"Don't you ever brush your teeth?" There was something of incredible amazement in the young teacher's

voice this time.

"O, yes'm, sometimes I do, when I don't forget it, and Ma, or Gertie reminds me," answered the lad, his tones still cheerful, for not having been taught the necessity of the constant practice of good health habity. Bennie did not realize how his yellow-ed teeth, and bad smelling breath, with the knowledge that he seldom ever brushed his teeth, distressed his young teacher, whom he thought uncommonly pretty.

If asked why he thought his teacher

pretty Bennie would have reddened and stammered something that was not very clear, but the night before he had told his mother that he liked the new teacher, because she had such a nice smile, with two even rows of white teeth, that were as clean and bright as the white glazed plate he

was eating his supper from.

Distressed by what she had just learned about Bennie's teeth brushing habits, the young teacher decided to make an investigation at once, to discover how many of her pupils regular-

ly brushed their teeth.

Out of the roomful of thirty children, only five raised their hands, when she asked all who brushed their teeth regularly twice each day to raise their hands. Fifteen other children, including Bennie, said they brushed their teeth irregularly whenever they thought of it, and seldom if ever used a tooth brush.

"Children, when you go home tonight I want each of you to ask your parents to give you twenty-five cents. With the money you are going to buy a tooth brush and a tube of tooth paste, and we are going to take some lessons here in our school room on how to brush our teeth, then we are going to take the tooth brush home, and every little boy and girl in the

third grade at Mount Carmel school is going to brush his or her teeth twice, every morning on rising, and every night before going to bed."

"My Papa thinks it is foolishness to spend money on tooth brushes and tooth paste," a small sandy-haired boy, with two teeth prominently missing from his front upper row, raised his hand.

"Then I'll write your Papa a note," the teacher said, not daring to allow the child to get away with this statement; too many others might make

the same excuse.

"All right, I'll tell him that if he don't give me a quarter, the teacher's going to write him a note," the boy

Daisy smiled at the boy's quick acceptance of the talking point she had given him, and she saw by the looks on many of the other children's faces that they, too, were preparing to use the talking point.
"Tell your parents," she instructed,

"that clean teeth mean good health, and help to save doctor's bills."

The second day of school for the third grade at Mount Carmel was over, and Daisy Miller, in her sturdy little car was driving into the town six miles away where her brother operated a drug store.

"Bill, I want thirty small size, medium bristled tooth brushes, and thirty small size tubes of tooth paste, and you will have to take \$7.50 for the lot," Daisy announced, as she walked into her brother's store.

"Young lady, what have you done, opened up an orphan asylum?" Bill

teased.

"Something like that," Daisy responded. "I have thirty children in my room at Mount Carmel school, Only five of them brush their teeth regularly. I am going to give the five who do use tooth brushes, a new one, and I am going to teach the other twentyfive children to know what a clean mouth feels like."

"Good for you, old girl!" Bill heartily approved. "If there were more school teachers like you, drug stores might become rich selling tooth brushes and tooth paste, if all the teachers didn't hold the drugstores up on the price the way you have held me

The closing period for the third grade at Mount Carmel school next afternoon was devoted to a tooth brush drill.

Thirty boys and girls recited as they went through the motions of brushing their teeth with a tooth brush.

"Now, children, I am going to give each of you your tooth brush, and tube of tooth paste. You are to take this home, and after supper tonight, before retiring, put some tooth paste on your tooth brush, and using a glass of water, brush your teeth carefully, just as you have learned in the drill. In the morning I want every one of you to report that you brushed your teeth before retiring tonight, and in the morning before eating breakfast. Every day you will report to me on whether or not you brushed your teeth twice the day before, and at the end of the month every child who has not failed to brush his teeth twice every day will receive a reward."

The children were delighted with the idea of their new tooth brushes, the tubes of paste, and the announcement that constant use of their new brushes would bring a reward made the thought of the constant use of the tooth brush more like play than work, or the acquiring of a desirable health habit that had been previously neglected.

The weighing and measuring of all of her pupils when they began the regular use of their tooth brushes, and at stated intervals during the school year after the regular use of the tooth brushes had been established, Daisy decided would be carrying the health work a step further, also opening the way to the discovery of children who were underweight, and the correction of the defect. The adding of weight for children who were underweight, the teacher, saw, too, would probably lead to the serving of milk lunches.

The daily health inspection she had already inaugurated when she had told the children that their tooth brush activities would be checked on every day. She would use the subject matter, arithmetic, spelling, English, reading and writing, together with the home life, and general experience of the child to tie up with health activities, and most important the acquiring of good health habits.

Finally a health examination for every child in the room by a good physician, with the correction of any defects he might find, would make a complete school health program for the year.

No regular school health work was done at Mount Carmel school, but this did not daunt Daisy. If during the eight month's school term she could teach the thirty children in her room the fundamental health habits, and instill into them the importance of the habits, she felt that her work at the school would be worthwhile.

The next morning every one of the thirty children in the room, reported they had brushed their teeth the night before, and before coming to school that morning

that morning.

Bennie and Tom, the little boy who had feared his father would not let him have money to buy his tooth brush and tooth paste, reporting more enthusiastically than any of the others. To make the report more impressive, Daisy inspected each little mouth, as the oral report of the child was given. In that way Daisy hoped to impress upon the children the importance of both the twice daily tooth brushings, and the daily inspection, as well as nipping in the bud any attempts to falsehood in reporting the observance of the twice daily habit on the part of the children.

The announcement that the last period of the day would be taken up with a trip to Mrs. Green's store, near the school house for weighing, was greeted with delight by the children.

Before leaving the school room, the name, address, and names of the parents of each child were recorded on a card, as was the heighth of the child

"Ha, Miss Miller, Tom's got a brick in his pocket," cried Bennie, who had been given a place by the teacher to help her place the weights on the scales, as Tom stepped off the weighing platform of the scales.

Tom's sallow little face turned red, and he stammered a denial to Bennie's statement, but under the calm eyes of his teacher, he produced the brick. that weighed a couple of pounds, and stepped back on the scales to be weighed.

After that incident the children were all careful that they carried no bricks in their pockets, for teacher had told them that it was very important that she know their correct weight.

Ten of her pupils Daisy found to be underweight. Some of these children lacked only a few pounds of their normal weight for their age and heighth, while others were as much as five to 10 per cent, or more underweight, which was serious for young children.

The underweight children, Daisy decided must have milk lunches every day, and their parents must be in-formed of the failure of the children to tip the scales at what they should.

It would not hurt to give all of the children a milk lunch every day at the morning recess period, but where was she to secure the milk?

The community in which the Mount Carmel school was located was not by any means a community of wealthy farmers, though there were several dairy farmers, who lived near the school, who apparently were success-

ful in the dairy business.

The daughter of one of these dairymen, was in Daisy's room. This dairyman, Mr. Wood, was the man Daisy first made her appeal to for milk for the morning lunches for her school

"No other teacher ever had such fool notions as you've got about teaching children," Wood gruffly told Daisy, when she went to him with her Daisy, when she went to him with her request for two gallons of whole sweet milk at a reduced price, every school day. "I ain't a wealthy man, my wife is sick now in a Tb sanatorium, and I'll tell you I'm not in favor of feeding children extra at school. If they can't get enough to eat at home let them go without. I feed my girl enough, and the others can feed their own children."

"But Louella." Daisy sweetly re-

"But Louella," Daisy sweetly remarked, "is nine pounds underweight, Mr. Wood. For a nine-year-old girl, especially when she has a mother who is in a Tb sanatorium, nine pounds underweight is a serious matter. A glass of fresh milk every morning should help Louella put on weight considerably, if she observes other health habits."

"Well, for my daughter, it is all right," Wood said. "I will see she gets plenty of milk, if you say she needs it, but I won't give a single glassful for any of the other children in this com-munity, unless I'm paid the full mar-ket price for it. I look out for my children, the others can do the same."

Disappointed, but not defeated, Daisy left Wood's farm for that of his contemporary, David Cooper, who also ran a dairy farm.

Cooper had no children in the Mount Carmel school, as his family had grown up, and passed the school age, but Daisy found him one of those public spirited men that are always a boon to school teachers, and others who are seeking to do things a little different, and really help people. He

agreed immediately to furnish two gallons of milk five days a week for the children at the school, pro-viding she would have two of her larger boys call for the can of milk every morning. To this Daisy readily agreed, and she went to bed happy that night. The milk lunches would begin day after tomorrow, for she had to acquaint the children with the proper use of the morning milk lunches, and she had to have each child bring from its home a glass to be used for drinking the milk.

"Now, children, remember your name is on your own glass, on the piece of adhesive tape," Daisy instructed, as the children sat in their desks, their glasses atop the desk waiting for their first milk lunch.

Using a pitcher to pour the milk Daisy visited each child, filling each glass to the brim with the nourishing

white fluid.

"Gee, Miss Miller, that was good!" Bennie heaved a man's sized sigh, as

"It sure was, teacher," Tom corroborated Bennie's statement, and all over the room children put down their glasses, while their faces showed satisfaction.

Several of the children showed a distaste for the milk, and Daisy devoted her time to persuading these children to sip the glass of milk, for Daisy knew that if once she could get the children to drink the milk they would continue to do so, to be like their little friends if for no other reason.

Little Louella Wood had brought her own milk in a bottle, for her father, the other dairyman of the com-munity, had said that his daughter should not drink any of David Cooper's cow's milk, after he himself had refused to furnish two gallons of milk a day, at cost to provide the milk lunches for the children of the third grade at Mount Carmel school.

Their milk lunch completed, the boys and girls formed in orderly line and moved to a pan of hot water, Daisy had placed on the stove early, and each child's glass was carefully washed and scalded and returned to his or her desk to wait for the next

morning's milk drinking.

"I'll bet you don't have anything in your room like we have in ours," Bennie boasted to a little boy from the fourth grade room at Mount Carmel school, and it was this little boy who told his teacher that he, too, would like to have a glass of milk to drink at recess every morning, and after all of the teachers at the school had held a joint meeting, regular milk lunches were served every morning to all of the children at Mount Carmel school.

David Cooper furnished the milk at wholesale prices, for it was right for the big-hearted dairyman to furnish the milk for one room if he wished, but not for all of the children in the large school.

After milk lunches were inaugurated for the entire school, all children who were underweight were given the milk free, others paid two cents a day for their glass of milk.

Children in all of the grades of the school were weighed and measured, as the pupils in the third grade had

At the principal's request the State Board of Health sent a dentist down to remedy defects found in the children's teeth. Escorting a group from her own room to the dentist Daisy was surprised, and at first confused, when she discovered that the dentist was George Mason, whom she had met on a summer vacation while he was a dental student, and she at a teachers' college.

Thrown together constantly through the glorious summer months at the farm home where they spent their vacation, the two had developed a genuine case of love before the season was over.

Back at their work for the winter a rift had occurred, which had ended a year before by Daisy breaking their engagement. Where George had gone to practice his profession on graduation from the dental school Daisy had not known, until she saw him remedying in a most businesslike and professional way the defects in the teeth of the pupils at Mount Carmel school.

"How do you do," Daisy greeted the young dentist crisply, and he disregarding Daisy's not too free greeting laid down the drill he was using on a third grade youngster's tooth, grasped Daisy's warm soft hands in his professional ones, only they were not very professional just then.

"Well, well, young lady! How lucky I am to find you here. I did not want to come here when I was first told this was my next job, but how glad

I am now that I came."

"Doctor, don't you think you'd better attend to business?" Daisy asked in her most teacherlike voice, as the youngster the dentist had left in the chair seemed inclined to take lessons

dentistry by investigating the dental tools spread out temptingly near him.

"All right, young woman, business is business," the doctor said, retriev-ing his drill from the would-be dentist, "but when business is over I warn you, Miss Miller, business won't be business with us."

Back in her schoolroom Daisy took up her interrupted lesson in arithmetic, while her face burned, and her hands were hot. To think that George thought he could come back like this after a year of silence, and win her again as he had done that summer two years ago, only to leave her as he had done before. She would show him, for at that moment Daisy did not consider the fact that she had had as large a part in the quarrel that had caused their separation as the young doctor had taken.

But her eager pupils were waiting for their arithmetic class, which she was tying up with their health lessons in learning good health habits. She could not spend her time thinking of the old love affair now.

"Tom, if you sleep nine hours every night with your windows open, and play outdoors one hour every day, how many hours do you have left out of the twenty-four?" Daisy asked.

Tom's hand went up quick as a flash, "Fifteen, teacher!"

"No, he's wrong," Bennie's hand was up as quickly as Toms' had been, "It's fourteen hours, teacher."

"Right, Bennie! And after we have slept nine hours, and played outdoors one hour we have fourteen hours left in a day, now let's see how we fill that time up."

"If we come to school at 9 o'clock in the morning and leave at 3 o'clock in the afternoon, how many hours do we spend each day in school?"

"Six," it was Louella Woods, who

answered this time.
"Fine, Louella," Daisy smiled brightly at the little girl. Louella, rapidly gaining the extra weight she needed, was growing quicker in her studies every day, as her body grew stronger, and her eyes brighter.

"We sleep nine hours, play out of doors one hour, and go to school six hours, how many hours does that leave us, Paul?" Daisy asked of a slender, dark lad, who also weight at a very satisfactory rate.

Paul calculated rapidly, "Eight, teacher," he called while half a dozen hands were waving excitedly for the

chance to give the answer.

"Very good, Paul," Daisy gave her approval to the lad's answer.

"Now, children," she addressed the class, "Paul says after we sleep nine hours, play out doors one hour and go to school six hours we have eight hours left. That is a lot of time. Lets find out what we do with that time? From 6 to 8 o'clock in the morning we help Mama and Papa about the house, dress, get breakfast and walk to school."

"That is two hours," Lee Jones, raised his hand.

"Yes, Lee. From 3 to 4 o'clock we play outdoors, and from 4 to 5 o'clock we play, outdoors the last hour, too, if the weather is suitable."

"Two more hours," several children raised their hands.

"Yes, and from 5 to 6 o'clock in the evening we help Mama and Papa again, and from 5 to 7 we eat, from 7 to 8 play again, and from 8 to 9 we read, at 9 we go to bed. Now, children, I want you to tell me how we spend our whole day."

Bennie raised his hand, "Please, teacher, I can tell; nine hours sleep, three hours working, two hours eating, six hours in school, one hour playing out of doors, two if the weather's not bad, another hour playing after eating at night, and one hour reading before we go to bed."

"Very fine, Bennie! And now our arithmetic lesson is over for this time. Our English lesson is next. Today we are going to write sentences."

"What is a sentence, Mary?"

"A sentence is a complete thought that tells what one is thinking about,' Mary answered.

"All right, Mary, give me a complete sentence that will tell me what you are thinking about baths now."

"To keep healthy little boys and girls must take a full bath oftener than once a week."

I am sure you know a "Henry, sentence that tells about teeth."

"I brush my teeth twice every day." "Good!"

"John, you want to use sleep in a sentence."

"Sleep nine hours every night with your windows open," John immediately responded.

"Louella, in a sentence about milk,

what would you say?"

"Drink as much milk as you can every day, at least three glasses, and not tea or coffee," Louella's sentence came quickly.

"Next I want a sentence about veg-

etables and fruit," the teacher told her eagerly waiting class.

A dozen hands went up. "Eat some vegetables and fruit every day," a chorus of voices called out, when Daisy gave all of the children permission to speak.

"Water is the next word I want you to use in a sentence," Daisy told the class.

"Drink four glasses of water every day," Bennie, called out before another child could beat him to the statement.

"How do we use play in a sentence,

children?"

"Play part of every day out of doors," a timid little girl raised her hand and spoke before any of other children had a chance to give the sentence.

"Now, children, we have a difficult word to use in a sentence this time. It is bowel. How shall we use it?"

Bennie, unabashed by the word, raised his hand, "I know, Miss Miller, Every child must have a bowel movement every morning."

"Very good, Bennie. This time I want you all to tell me what we call these sentences we have been making, and how many of them there are.'

Tom's hand went up. "There are eight of them, Miss Miller, and they are called the 'Rules of the Game.' They tell us about health habits that are important for us to remember if

we are going to stay well."
"Ver fine, Tom! Can some other little boy tell me what is most import-

ant in health habits?"

Every hand in the room went up. "Every day, and all of the time, do not forget your health habits."

"That means, Bobby, that if you brushed your teeth yesterday, you do not have to brush them today?" Daisy asked of a boy who was eagerly waving his hand...

'No'm, it means that if you washed your teeth yesterday you have got to wash them again today, and tomorrow, and every day, for a habit is not a habit, unless it's something one does every day."

"Yes, Bobby, that is true. Why is it so important for us to keep health

habits?"

"Keeping health habits keeps us well and happy, and saves money for our Papas and Mamas."

"That is just what it does," Daisy agreed with her eager class. When we leave school this afternoon, we go home and play outdoors for two hours, before helping Mama and

Papa, because this is a warm, sunshiny day, and children can play outside without danger of getting cold and wet."

"Goodbye, Miss Miller," the last child called out happily as he passed

out of the school room.

"Goodbye, Henry," Daisy answered, looking up for a moment from the health cards on her desk. They were the same cards she had filled out last fall for the thirty pupils of her room. There was now recorded on the cards, beside the age, weight and heighth of each child when the card was first made, the records of weekly gains, weekly inspections, defects found, defects corrected, grades made by the pupils each month, and the present health status, and school standing of the child.

The last records on Daisy's cards showed that sixty per cent of the children in her room had some aefect, teeth, tonsils, adenoids, heart, lungs, underweight, bad posture, bad nerves, defective vision, or hearing. Of the number of children suffering from defects twenty-six per cent had already had the defects remedied, and Daisy felt especially haveful that soon all of the childre with physical defects that could rected would have these defect. or-

She was closing the desk file when she looked up to see George shilling

at her in the doorway

"The last youngster has received his last tooth filling today," the dentist announced seating his tal form on Daisy' desk without the formality of asking permission.

Daisy looked at the doctor in surprise. "I did not invite you in here,"

she said sharply.

"Sure, you did not invite me, and that is just why I am here," Dr. George Mason lighted a cigar, and made himself more comfortable his position on the desk.

"Constant practice makes anything possible; even the forgetting of heart

ache," he read from a framed and colored motto on Daisy's desk.

"Phew!" he ejaculated. "Is that what you have been doing the past year, making a constant practice of forgetting me?" the doctor asked looking steadily into Daisy's

"You flatter yourself, young man. The heartache that motto refers to has nothing to do with you."

"Hm-m!" The doctor lighted anoth-

er cigar. He didn't seem to be having

much success with the first one. "I am disappointed. I was sure it did refer to me. Now you've shattered all of my beautiful dreams."

Suddenly Dr. George Mason leaned forward until his strong, capable hands touched the slender shoulders of the blue-eyed school teacher, "Daisy, why be so cruel to me? I swear if I had known where you were I wouldn't have been away from you for a whole year."

"I don't believe you," Daisy pushed

the hands from her shoulders.

"You have got to believe me," the doctor was distressed. "When I looked up and saw you in that room with these youngsters this morning you looked like the sunshine, and heaven, and everything beautiful and lovely to me.

Daisy was looking away past the doctor, past the motto on her desk. Could she believe George, that

rared after all as she cared?

Slowly Daisy raised her face to the doctor's, and he read in those eyes the message he was looking for. He dropped quickly and quietly from the desk to the floor, where he took the slender form of the teacher of the third grade at Mount Carmel school in his arms.

"Miss Daisy," it was Bennie's voice calling from the door, "may I come in? I forgot my lunch box, and Mama doesn't have another one for

me."

"Yes, Bennie, come in," called, slipping out of the young doc-

tor's arms.

The lad went to his desk, secured the lunch box, and started to leave the room, then he looked inquiringly at his teacher.

"Miss Daisy, you like Dr. Mason,

don't you?"

Daisy blushed, and the doctor looked smilingly down at the boy, a shiny quarter in his hand. "Sure, she does, Bennie. You take this quarter and run along now, Miss Daisy wants to talk to me."

Bennie pocketed the quarter, after a grave, "Thank you," but he was not ready to go yet. "Miss Daisy, if you and Dr. George have any children are you going to teach them to brush their teeth twice every day, and all of the other health habits you have been teaching us?"

"Yes sir, Bennie, we certainly are!" Dr. George answered the boy's question, as he put him gently, but forcefully outside the class room, and clos-

ed the door behind him.

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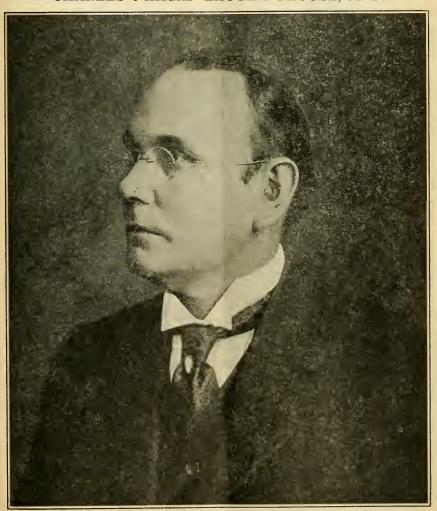
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CHARLES O'HAGAN LAUGHINGHOUSE, M. D.



DIED AUUST 26, 1930

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The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

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The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West) "Our Babies"
Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Bables
Hints to North Carolina Mothers Who
Want Better Bables Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).
Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 vears.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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OCTOBER, 1930

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DR. JACOCKS SUCCEEDS DR. LAUGHINGHOUSE

The State Board of Health in special session September 24 unanimously elected Dr. William Picard Jacocks to fill the unexpired term of Dr. Charles O'H. Laughinghouse, as secretary of the Board and State Health Officer.

Dr. Jacocks was born December 9, 1877, at Windsor, Bertie County. He was graduated with the degree of A. B. from the University of North Carolina in 1904 and received the degree of M. A. in 1905. In 1911 he was graduated in medicine from the University of Pennsylvania. He was licensed to practice in North Carolina the same year and joined the field forces of the State Board of Health in the statewide hookworm campaign. In 1914 he was called to an executive position on the staff as Director of Rural Sanitation. The following year he joined the staff of the International Health Board, with which he has since served with the exception of duty as Captain in the Medical Corps of the United States Army during the World War. Following his discharge from the Army he spent a year in the School of Hygiene and Public Health of Johns Hopkins University. For some years he has been stationed in Ceylon. The Board unanimously adopted the

The Board unanimously adopted the following offered by the committee

consisting of Drs. Thompson, Orr and Crowell:

"The State Board of Health records in its minutes its profound sense of personal sorrow and public loss at the death of its late Secretary, Dr. Charles O'Hagan Laughinghouse, who after a brief acute illness, following several weeks of declining health, died on the afternoon of August 26, 1930.

Dr. Laughinghouse stood easily in the forefront of the profession of medicine and the excellence of men, and in the midst of remarkable public service he fell unexpectedly, a Prince and a great man.

He was great in head; great in heart; great in integrity of character; great in industry, and in loyalty to his friends and to the public.

He knew medicine, but he knew more than that: He knew men and books and the wisdom of the sages. He was a splendid example of the cultured medical man.

He lived his life so serviceably, uprightly and honorably, that while his going leaves a deep sense of loss, it gives no cause for tears or beating of the breast. He was all that North Carolina expects a citizen to be. In full man-size, he was the Spirit of North Carolina incarnate."

MALNUTRITION AS RELATED TO SCHOOL LUNCHES

By

ANNE WILFONG

Is there anything more necessary than adequate nutrition among our growing school girls and boys? Intelligence, to a certain extent, depends upon one's feeling, mentally and physically. A sound mind and body depends upon nutrition. Psychologists have performed experiments in regard to the effect of malnutrition upon the expression of intelligence of the school child. In doing this, they have found that the poorly nourished child was mentally defective. tranparent skin, dark encircled eyes, pinched chest and general condition indicated that the child was seriously undernourished. When the child was asked a question, he frequently stared, hesitated for an appreciable length of time before answering, then at that he seemed to "push" his voice. The child's answers were slow and labored, scarcely above a whisper. From such indications and knowing a child's home conditions, one is very likely to understand why the child was low in intelligence. Our question now is, how can we as citizens help to overcome such deficiencies which are preventable? Let us turn to school lunches and nutrition of the school child.

In the average family the school lunch is prepared in a hurry, for ususally mothers are busy people. For the most part the lunch consists of bread and butter, perhaps a hard-boiled egg or a piece of meat, a pickle and a piece of pie or cake. These are all wrapped together without much thought or care. By noon the bread is pickle-soaked, the pie mashed, and the flavors well mixed. The sight that meets the child's eye on opening the lunch is anything but attractive. The pickle looks best so he eats that and discards the rest. Why put all the blame on the school child? Because of the fact that malnutrition is becoming realized today by the majority of intelligent people, efforts are being made to eliminate these undue disturbances. Nutrition has come to be looked upon as a very important factor in the life of the individual. The public health workers realize the importance of diet for maintaining health, and the progressive physician is now effectively employing diet as a therapeutic measure.

In many schools, some rural, plan is being carried out in which a mid-morning lunch is provided. lunch consists of a bottle of milk. In some schools a bowl of soup is served each day to every pupil who wants some to eat with his lunch which was brought from home; the soup costs five cents a bowl. This idea of a partly warm lunch is growing in many schools, but we are far from giving the child the proper nourishment he should have. Of course in some city schools the cafeteria is in operation, but all schools do not have the funds to carry out the school lunch program. In many rural and urban where the child has only five cents to spend for his lunch, it is of a great consequence. Then there are scores of children in the public schools have not the necessary money for a lunch. The Parent-Teacher Associations have found a few who are unable to buy their lunches and there are parents who can hardly "make ends meet" when there are several children in school. For this reason, if a child spends five cents for his lunch, he should have five cents worth for his money.

Not only has the school lunch idea been developed in our schools but also the school breakfast idea. In several of the elementary schools in Cleveland, Ohio, this school breakfast program seems to be of very great importance. In practically every case the child's breakfast seems to be inadequate. The coffee and cake breakfast was found to be the most popular, although in some of the so-called better homes, breakfast consisted of a glass of milk. Investigators found that most of these children retired at a late hour and got up late in the morning, thus having very little time to create an appetite and to eat a proper breakfast. Naturally the children hurried off to school in an unfit condition to do their school work. In order to better these conditions the mid-morning milk lunch became very popular in order to supplement the coffeecake breakfast. Lessons were taught, breakfast menus were made, and considerable enthusiasm was aroused among the children as to the proper breakfast diet. They were also invited to eat breakfast at the school. Each child was asked to bring ten cents, a sauce dish, a bowl and a spoon. Oatmeal and prunes were cooked on the day before and reheated the following morning. For breakfast each child had oatmeal, prunes, and sandwiches. Of course the menus varied from time to time, but with such an idea verv much interest was aroused not only among the school children but also among the parents. The parents learned how little a good breakfast cost and they begin to cooperate in helping their children have a nourishing breakfast. It was noted by the teacher in many instances that there was an improvement in the children's mental and physical condition. Just from this type of experiment, perhaps the time will come when every school will have a lunch room. Indeed it is an enormous, but necessary problem which should be worked out in order to prevent malnutrition among school children.

The food eaten by the child must

contain the minerals necessary for building and repairing all the different parts of the body; it must contain energy or fuel for the work of the muscles; and it must serve to regulate all the chemical changes which health and growth depend. Regularity of meals as well as quantity and quality are just as vital to the child's health and well-being as they were before he started to While the school lunch is no more important than any other meal, it more difficult to keep up the standards of wholesomeness in it than in any of the others.

A lunch room should be at self-sustaining during the school year to justify its existence, unless some means of endowment is provided. In some large cities the financial problem of the weak lunch room is taken care of by combining all the income of the lunch rooms in a common fund with a central controlling office. This enables the strong lunch room to help carry the weak one along. The cost of equipment for serving the food should come out of the regular school funds and not from the pupil's pockets. If the school needs a new book cabinet, laboratory table, or writer, the pupils are not asked to buy it; the same is true for lunch room equipment. Nevertheless, too often the school board pays too little attention to the lunch room; too often the superintendent and school official fail to think much of the problem of the lunch room save that it must be kept on a paying basis, be self-supporting-a place where food is sold at a cost which allows a sufficient margin to permit the purchase of additional equipment, dishes, etc., in fact anything that is needed. Frequently the lunch room gets along as best it can with the board refusing to buy any extra tables, etc., until the manager, becoming desperate decides that the only way to get the much needed equipment is to make a bigger profit by serving smaller portions, by using skimmed milk instead of whole milk, by substituting inferior foods for the best; thus cheating the children out of their food values.

The Parent-Teachers Association should be familiar with the work of the cafeteria, the preparation, etc. It is the business of the mothers to observe how the lunch room is run, not in a critical way, but to just see how the cafeteria is conducted. A different parent might eat at the lunch room each day to observe the type of lunch, cost, etc. Undoubtedly many of the lunch rooms would improve if this plan were worked out. Too many of them serve the food on which there is most profit.

Milk should always be served at cost and purchased from the cleanest and best diary. The noon meal should be sufficient to suit or satisfy the child's appetite and needs. For many of our lunch rooms are run on the profit basis. Does it pay to profit in this case? In many school lunch rooms the children do not get full value for their money. Half pints of milk sell for five cents instead of two and one half cents that they cost. Yet we cry constantly to the children to drink more milk.

The question of economy seems uppermost in the minds of managers. A

lack of food is preferable to a lack of funds. In many cases the salary of the manager, the cost of equipment is taken out of the pockets of the school children, and especially out of the pockets of those who can least afford it

The time may come when our schools will provide at cost an adequate lunch. Shall we let the factories and mills surpass our schools in providing a good meal at cost? Many such firms serve food at a cost less. providing soup for three cents, rolls for one cent each, etc. Our school children need this nourishment even more than the factroy workers, for the latter are usually grown, while the girls and boys are at the period when they need plenty of wholesome food for body building. Serving an inadequate lunch encourages lunching between meals. However, we should stress very emphatically that the school lunch room has more importance in the school program than any other department. Thus the school lunch room should never be thought of as a place to make a big profit in money, but instead the profit should be directed to the children who will obtain the necessary food values which will give them a healthy mind in a healthy body.

WEIGHT AND HEIGHT AS RELATED TO NUTRITION

 $\mathbf{B}\mathbf{y}$

JULIA MORGAN

Conservative estimates show that at least one-third of the children in any ordinary American community are undernourished. This condition is equally true in the preschool and school periods, among both boys and girls.

We do many things badly in this country, but nowhere have we shown less intelligence than in the care of children from two years of age until after puberty. Malnutrition exists among them to an almost incredible degree. A recent survey in New York shows that of the million children of school age in that city, approximately one hundred and fifty thousand are stunted in their growth, retarded one to three years both in height and in weight.

This condition is not confined to the poor or to the children of parents in

moderate circumstances. A survey of the younger boys in two famous preparatory schools noted for the wealth of their patrons has been made. More than thirty per cent of these boys are ten per cent to twenty per cent underweight for their height.

Why is such malnutrition allowed to exist? The reasons are various. In the first place, no effective steps have been taken either by the medical profession or in the schools to identify this group. When children are examined by the private physicians, if their various vital organs are normal, little attention is paid to their state of nutrition. If the child falls behind in his studies, pressure school is increased. If he fails he is called lazy. Later in life many of these children, unable to bear unusual stress, become physical and nervous wrecks.

Study and treatment of these children in nutrition clinics show that in every case causes for the malnutrition can be found, and, when the causes are found and removed, the child, responsive to a strong force in nature that makes for recovery, will promptly return to normal weight and height.

The first step necessary to treat these children is to identify them. Scales, a tape measure and a table average weights for height will enable any person to discover all but the border line cases, because any child who is habitually ten per cent or more under average weight for his height is retarded at least a year in his development. This simple cedure of weighing and measuring the child is the first practical measure for success in his treatment. If the parent, the teacher, the school, and the nurse and the child himself understand his condition, in most instances, steps will be taken for its correction.

The child's whole life at home, at play and at school, especially his habits of sleep, study and exercise, should receive attention as affecting his nutrition. Practical demonstration should be made of the essentials of growth and health of the child to parents, teachers and all concerned in his care. Work in nutrition is partly medical but largely educational.

As yet it is impossible to have in most schools, a trained nutritionist and a child specialist; often neither physician nor nutritionist is available, and it is a rare school indeed that has both on its staff. It usually follows, therefore, that any nutrition work that is done—the selection of children in need of nutritional care and the provision of such care—must be done largely by the teacher.

In selecting children in need of nutritional care, the teacher has recourse to at least three methods, all of which should be used, but I will discuss only one. Determination weight and height is placed first not because it is the most important but because it is the simplest and can be accomplished promptly at the outset at one clear-cut, definite step in the right direction. Height and weight should be determined for every child at the beginning of the school year and weight at least every month thereafter. If the measurements are to be of any value, they must be taken accurately at the same time of day, with same amount of clothing, and with other conditions as nearly uniform as possible.

Weight alone is no longer regarded as adequate in judging nutrition. Nevertheless, weight is of decided value in helping to determine nutrition, especially in selecting the markedly undernourished group. Several studies have been made during the past few years in which the results of weighing have been checked by medical examinations. The general conclusions from these studies is that the weight standard errs little in the children it selects as poorly nourished, but that it fails signally to select all undernourished children. Many

children who are less than ten per cent underweight will be found on examination to be poorly nourished, as will also children of average weight or above. Such children may be in even greater need of attention than some of the underweight children because they are malnourished, whereas those underweight may have diets that are qualitatively good but somewhat low in amount.

The teacher should be familiar with the characteristics of a healthy, well-nourished child and should check each child against this standard. The chief characteristics of nutrition which the teacher may observe are: the general appearance of vitality and well-being as reflected in the pupil's carriage, facial expression, and activity; his degree of thinness or fatness; the color of his skin and mucous membranes; and the firmness or the flabbiness of his flesh and muscles.

Good nutrition requires a diet ample in amount and containing all the essentials for the growth and functioning of every part of the body. The teacher may get a fair idea of the adequacy of the pupil's diet by determining his habits of eating and the extent to which essential foods enter into his dietary. She needs to know for each child whether he eats breakfast and of what it consists of, whether he likes milk and how much he drinks every day, whether he drinks tea or coffee and how much, whether he likes and eats vegetables, the number and the regularity of meals, and the amount of candy and other sweets he eats between meals. She should also know the usual hour of going to bed, the amount of sleep, frequency of motion-picture the shows at night, the amount of home work he has to do, the number of hours spent outdoors, and other important factors.

The most accurate method of securing this information is through private interviews. It is easy for the teacher, who is interested, to gain the confidence of children or their parents and to find out the exact facts.

With this information before the teacher, she can plan her nutrition program to meet the needs of her group. She will know which food and health factors need to be most stressed; which children need to add extra weight; and what, in general, are the problems on which she needs to work. She will be in a better position judge the nutrition of her group than if she had trusted to weight alone, and she will have the data with which to begin a sound piece of constructive work, her aim being not merely to bring a few underweight children up to average, but "to secure for every child an adequate diet, a wholesome program of living, and a state of optimum nutrition and good health."

A study was made among 1773 children in the elementary schools of Moberly, Missouri, including six public schools, two parochial schools, and one negro school. This study was undertaken by the Nutrition Service of the Midwestern Branch of the American National Red Cross. The work was under the direction of a trained nutritionist. The teachers made and recorded all weighings of the children, exerting every effort to carry out the instruction of the nutritionist. physicians in the city assumed sponsibility for the physical examination of all children. Estimates of underweight were based on the Baldwin-Wood table. Visits were paid to the homes of the children and every effort made to enlist the interest of the mothers in correcting this condition through the removal of physical defects, proper food selections, and the establishing of good health habits.

In addition to directing the study, the nutritionist spent a half-hour period every week in each room concerned, teaching the children nutrition and its relation to health. Effect of nutrition instruction on underweight among the 1773 school children.

Classification of Children	Before Nutrition Instruction		After Nutrition Instruction	
	No.	Pct.	No.	Pct.
15% or more				
underweight	140	8	58	3
10 to 15% underweight	249	14	114	6
7 to 10% underweight	163	9	113	6
Less than 7% underweight	1224	70	1448	85

The results of this study show that nutrition instruction in the schools is a good thing, but if nutrition instruction is to result in habits fixed in the child for life, it must, like arithmetic or spelling, be made a constant part of the school curriculum.

COURT ROOM SANITATION

The following letter from a woman living in Tennessee together with the reply of Chief Engineer Miller for the State Board of Health should be of interest to many people.

The Tennessee woman writes:

"I attended court, in Bryson City, North Carolina, several weeks ago, and was surprised to see very insanitary customs in the court room. The use of bucket and dipper, as only available water for jury, and the custom of kissing the Bible when taking oath seems astounding in a State which ranks as high as your own in matters of Public Health.

"I have read with great interest, the progress of health conditions, you have accomplished in North Carolina. It would seem the above mentioned customs could be improved with great benefit to the State.

"Owning some property in your State and having a great admiration for its administration, I felt this letter would not be out of order."

Mr. Miller's reply follows:

"We beg to acknowledge yours of August 30th calling attention to your

THEN AND NOW

"Some of the hale and hearty oldtimers want to know why it takes such an endless amount of hygiene, prophylaxis, sanitation, dietary regulation, medical examination and what not to raise healthy children now-adays when they used to grow up that way. The health officer answers that it may be a consummate mystery but people used to raise apples without spraying, pigs without inoculation against cholera, cotton without fighting the boll weevil, cattle without precaution against tuberculosis .- So recently as the World War, Uncle Sam had a hard time finding 6,000,000 able-bodied men." - Illinois Health Messenger.

observation as to sanitary matters connected with the court at Bryson City.

"The jurisdiction of the State Board of Health does not extend into these matters. With regard to kissing the Bible and taking oath, I am of the opinion that that is a requirement of statute, however, I have observed that as a matter of practice persons taking oath do not ordinarily kiss the Bible, but simply make a motion of approaching the lips with the Bible.

"With regard to the use of the common dipper in the court room, this is a matter on which some public education I think could well be conducted, although we have no jurisdiction to require the discarding of this obsolete practice and the use of drinking fountains or individual drinking cups.

"Let me assure you that we appreciate your interest in citing these matters to our atention, and it is my opinion that if a considerable number of people evidenced as much interest as you have shown, it would be fairly easy to have these insanitary practices corrected."

OUR CHILDREN

(Editorial by Miss Helen Dunlap in Edgecombe School News)

The universal reason for the world continuing to exist is children. Imagine the chaos that would result if suddenly all children were taken from the world and the hope of any new children entirely killed.

Overnight the fundamental urge that keeps the world moving along in a well ordered manner would cease and take with it all the motives that are building a civilized world. Barbarism would succeed civilization, materialism would supplant idealism, selfishness take the place of unselfishness, and the present far-reaching achievements of mankind would crumble to dust.

It is through our children that we may continue to live; through them the achievements of one generation are carried on to the next and the next. Down through the pages of history children have been constantly moving forward in the stage of life. Savage races had little regard for child life, the higher the race is civilized the greater the emphasis is placed upon childhood. And now in the educational world the 20th century is being called "the century of the child."

Of all nations, it is probably true that America has the most idealistic attitude toward childhood. She is demonstrating this in her nation-wide program of public education. The philosophy of present day educational leaders is: That No Child Shall Be Barred From the Right of a Good Elementary and Secondary Education.

Mothers and fathers, next September you are going to start your little boy or girl upon a new adventure. They are going to leave the small world of the home and enter into a new and fascinating world. All of us know that if we start the small ones out with strong and sturdy bodies

and good equipment that they will get much more out of their school life.

We have six months in which to get them ready to start to school. We are most anxious to have them come to school in the best physical condition so that they will be strong enough to do a good day's work every day and stay in school every day. We would like to have every mother and father in Edgecombe county take as their goal the starting to school of a 100 per cent healthy child next September.

We, the schools, are very anxious to help your child develop good habits this first year. We want to have the kind of school in which he will find happiness, success and stimulation to grow in a well rounded development. Won't you help us to make this year the best first grade year that we have ever known. If the doctor finds that your child has bad tonsils, or bad eyes or bad teeth won't you please have these defects corrected this summer and send a strong healthy child to school next fall?

In addition to the importance of health, may I not urge that you also try to keep your child in school every day. We have so many first grade children that fail to finish first grade in one year merely because they miss so many days. Won't you please keep your child in school every day?

The third important item that I wish to call to your attention is school materials. So many parents seem to think a child can learn without school material, or that all that is necessary is a book. Outstanding educators have found that little children in the first grade cannot learn and do not develop when they do not have the needed materials. Won't you plan this summer to lay aside

enough money to buy the child's school materials on the first day of school next fall? Every year we have several first grade children that cannot finish first grade merely because they do not have their materials.

All parent-teacher associations are earnestly urged to make a united ef-

fort to help start the finest and healthiest group of children next fall that have ever been started in the history of Edgecombe County. Let's remember that we cannot build an enduring progressive state with weak, sickly, dull children for "the future race moves forward on the feet of little children."

AN EYE TROUBLE OF MID-LIFE AND LATER

The first serious change of vision to affect the man or woman approaching middle life is known as presbyopia. It is not a disease, but is a natural physiological process which all human eyes and many animal eyes undergo at certain periods in life.

Persons with beginning presbyopia, when reading, are often observed by their friends to hold a book or paper farther away from the eyes than formerly. Why do they do this? The answer is simple if one appreciates what gives the human eye sharp nearvision. A few words of explanation.

In every eye, the entering rays of light coming from the near object must be brought to a focus in the central back part of the eye on the retina in the region called the macula. The macula is the point of clearest vision. This spot is not as large as the end of a lead pencil. It is only in this macular region that we get good vision. If the focus is sharp, vision will be clear. If the rays of light are not brought to a sharp focus, then, as with the microscope or opera glass not sharply focused, we see indistinctly. In order that light may be brought to a sharp focus on the sensitive spot of the retina, the crystalline lens, that firm, crystal-clear body suspended by nature just behind the pupil of the eye, changes its shape. Certain inside muscles pull or relax to adjust the shape of the lens for the reading focus or for close work. youth and early life, except with nearsighted people, as the muscles inside the eye adjust their pulls for nearvision the lens bulges forward (by some is even said to flow forward). This act sharpens the focus as needed.

Nature, in making the lens, apparently had some difficulty in providing nourishment for a long life, as happens with other tissues of the body, and, at the same time, keeping the lens clear as glass. Blood vessels, if supplied to the lens as to other parts of the eye, would shut out the light,-the lens must be kept clear. A different method had to be followed. In front of the lens is a clear watery fluid resembling distilled water with a tiny bit of salt in it; back of the lens is a jelly-like substance vitreous), also clear and transparent, thus making nature's provision for easy passage of rays of light. From these transparent fluid substances suitable nutritional elements pass through the covering capsule of the lens to nourish the tissues inside of it, in order to replace what wears out from use and to keep the lens in health.

At about the age of forty years, sometimes as late as fifty, changes take place in the lens and its capsule and in the muscles which control the lens. These changes affect the ease with which the lens may be reshaped for sharp vision. Its elasticity gradually becomes affected. The inside muscle pulls may, for a number of years after this lens change begins, continue providing fairly sharp vision, but often these muscles show impatience with the added load of work, by such symptoms as headaches, sleepiness, inability to continue work for

the usual length of time. The affected individual, unless he be near-sighted, relieves this strain by pushing reading matter and exacting work farther away. Sooner or later, very commonly in the middle of the forties, sometimes five or ten years later, the individual not previously wearing glasses, is required to wear glasses for near work. As a rule, in mid-life one sees at a distance of from arm's length up to a long distance ahead just as accurately as in youth.

With primitive people, as Indians, and those people who work in the open, the elders may continue the hunt, or chase, or ordinary work without noticeable inconvenience as long as they are otherwise physically fit. Unless faults of vision were shown earlier, no glasses are needed for the elders of primitive people who loaf about the camp, tepee, or pueblo, nor in times of idleness during old age, nor would glasses be required for ordinary workers at occupations beyond arm's length—plowing, chopping, digging, etc. Close vision is not required

of these people for any extended period of time.

With the printing press and universal education, with the factory and indoor labor, with close use of the eyes during nearly all waking hours, came the demand for glasses. After these physiological changes have occurred the loss of elasticity needs to be supplemented in most persons with appropriate glasses.

No man or woman should worry about this natural change requiring the use of lenses for close work even in early middle life. It comes to nearly all some time between 40 and 55 years of age, and until nature makes a better eye, or is able to supply nutrition to continue the elasticity of the lens as found in youth until old age is reached, human beings will have to cooperate and wear properly fitted lenses for the time presbyopia develops on throughout life, or adopt the alternative: cease close use of the eyes, which means to cease reading and give up close work .- National Society for the Prevention of Blindness.

GROWING UP TO THIRTY

By SUDIE E. PYATT

Thirty used to be an age at which one had definitely left youth behind, and though not quite middle-aged, one who had reached the age of thirty was recognized as being a candidate in the near future for the honors of the middle-aged. A single woman at thirty was a hopeless old maid, and a married woman at that age had left youth forever behind her, while men were going down the hill toward a comfortable middle-age.

Today, at thirty men and women are just getting ready to live. Single women at thirty are far from being old maids, or even bachelor girls. They are alert, wide-awake, young women, looking as youthful as many of them did ten, twelve, or even four-

teen years before. Married women at thirty are right in line with their single sisters of that blessed age, and no one thinks of a man at thirty as being old, though he may already have accomplished more than his father or grandfather had at that age.

This year I have an important birthday. I have grown up to thirty. I like being thirty. None of my other twenty-nine ages have I liked quite so well as I do this friendly thirty. Thirty, I decided was a convenient place on the road of life at which to stop and take stock, to look back over the years that were gone, and to look forward to the years that were ahead.

A philosophy of life, something to live by, makes life more comfort-

able and more satisfactory and happy. Thirty is a good place at which to definitely formulate this philosophy, if it has not taken shape earlier, so I began to put down in tangible sentences and paragraphs my philosophy of life—this story!

After formulating a philosophy of life, which is another phrase for mental health, thirty, I knew was, a good age at which to check up on physical, as well as mental health, and to determine just how my body stood, to my advantage, or disadvantage, and to plan to enhance the advantages, and make the disadvantages less of a drawback.

At thirty, I realize, too, that I must begin to lay plans, so that when middle-aged and past that age, I may enjoy some of the privileges that compensate for those ages.

I have grown at thirty to:

- 1. Know that good health, mental and physical, is one of the most important things for any individual.
- 2. Have a philosophical attitude toward marriage.
- 3. Be a square shooter in business, love and social relationships.
- 4. Be a better friend, and to understand others better.
- 5. Know people like you just as well if you are not a great success, providing you have the other attributes of a good companion and friend.
- 6. Stop expecting too much of myself and others.
- 7. Know that dreams if ever lived must be lived in today.
- 8. Know the beauty of passing happiness.
- 9. Have a conception of a friendly God-Father.
 - 10. A happy view of death.
- 11. A knowledge of the worth of accumulated months and years of experience in one particular line of work.
- 12. Appreciate the extra compensations of work.
 - 13. Learn that somehow courage,

hope, strength, do come to help one meet storms of sorrow and disappointment.

When I was a little girl I used frequently to hear my grandmother, a typical woman of the old southern school, say, "Without health you can do nothing."

It took a serious illness, and nearly two years and a half in a sanatorium to teach me the value of health, and its relation to the success and happiness of the individual. For as my grandmother said, neither success nor happiness is possible without, at least, a fair degree of good health.

Learning the value of good health, and after many months finally acquiring a return to near normal health, I discovered that good health, both mental and physical, was more a mode of living, and thinking, proper living and thinking, than anything else. To keep my good health now I know that I must live according to certain health rules that with the aid of physicians I have formulated for myself. The less complicated, and more natural these rules are, I find the better my health is, providing I strictly observe these few simple rules.

My rules, which are flexible, are:

A tepid bath, ending with a cold shower each morning.

Two glasses of water before breakfast each morning, and six or more glasses during the day.

Teeth brushed twice each day, and a good mouth wash used once a day.

Three good meals at regular hours, with milk, fresh fruits and vegetables, making up a part of my diet.

Retire not later than 10 o'clock six days out of the week.

One to two hours rest, minus my outer clothes in bed each afternoon when I return from work before going to my evening meal. (Formerly I rested two hours every afternoon, after the mid-day meal, but my work does not allow that now.)

A checking up at the hands of a physician, who is a specialist in the

disease, which caused my serious illness seven years ago. (This would not be necessary for a person who has always enjoyed fairly good health, and has no fears of the possible return to activity of some chronic condition. A checking up at the hands of a physician once a year, is sufficient for the average person.)

Visit a dentist twice a year.

Refuse to entertain regrets about the past, or fears for the future.

Expect happy, cheerful things.

Meet everyone with a smile, no matter how badly I dislike them. It is marvelous how smiles clear away clouds of dislike.

Be as nice as possible without becoming too intimate with everyone I come in contact with in both my business and social life.

These aren't the best or the worst rules a man or woman might adopt to live by, but in my case they fit, and I have found them workable.

In love, in business, in social relationships, I have learned that if I shoot square, and am honest with myself and others the rest does not matter—so much!

I began to be a better friend somewhere back along the years I have traveled to reach this pleasant thirty when I learned the advisability of studying people and discovering their likes and dislikes, and to respect these likes and dislikes no matter how much they might be at variance with my own.

Before I grew up to this friendly thirty I was too busy thinking of my own adjustment and maladjustment to people and conditions to spend any time trying to discover why people were as they were, and why a certain condition was as it was.

A better understanding of the people in the world in which I live has been one of thirty's gifts to me.

"I don't know what you have done to yourself, but I like you much better now than I used to, though I've always liked you." That's what a friend of mine, who has not seen me in ten years, said to me a few days ago, after our acquaintance had been renewed. The difference between what that friend used to think of me, and what she thinks of me today, I consider one of the greatest compensations of having grown from twenty to thirty in the decade since she first knew me.

It isn't easy for me to tell just why my friend likes me better now than she did ten years ago, but I think I know one of the reasons.

I am more interested in her, and in other people than I was ten years ago.

It was a great moment for me, in these years as I have grown up to thirty, when I realized that people liked me just as well if I were not a great success, providing I had the other attributes of a good companion and friend. In my teens I was firmly convinced that people would not like me unless I had rich parents, or I was very successful on my own account. My parents had never been wealthy, and in order to have friends I felt that I must first become a business success.

I have discovered that people do not care a whoop whether I am a success or a failure as long as they like me, indeed, they are more likely to love me if they do not think I am such a howling success. A medium amount of success, that is all right, but people do not want too much success of the people they associate with in their everyday rounds. It makes them feel less important themselves, and no on wishes to feel any less important than one has to.

People are more interested in impressing me with their own importance than they are in discovering just how important I may or may not be. They had rather tell me of their own successes—and operations—than listen to an account of the number of stories and articles I have had published—or my own tonsil operations.

With the realization that I was under no obligation to be a great success in order to make friends a burden rolled from my shoulders. The only difference was I had learned to be a good neighbor, which I had not been before. I had taken time to discover that other people had ambitions, too, even if they frequently were not more exciting than a determination to be the best little relator there was of a long and uneventful life.

I have stopped expecting too much of myself, of others, of situations, of life. I have dreamed some wonderful dreams, built some marvelous homes in the air that I have never lived in, in growing up to thirty.

I am glad I dreamed the dreams and built the castles—and lived in them for joyous moments of pure ecstasy, but grown up to thirty I am glad that I can find happiness, that the future looks inviting, and worthwhile without any dreams that might, but never do come true, or any crystal, rainbow-hued castles in Spain.—I say Spain because that is the traditional place where castles that might be built by dreamers find themselves towering among the rosy clouds of day and night dreams, more frail than soap bubbles.

I am an incurable dreamer. I shall always dream, but at thirty my dreams are much more possible of fulfillment than they were at sixteen.

Growing up to thirty I was anxious for the days to pass, looking forward always to some marvelous day when everything would be perfect. No more. I have grown to know that dreams if ever lived must be lived in today. I never know what my day is going to bring me. It may bring me only the prosaic commonplaces that everyday brings. It may bring me many unexpected things, and in the unexpected I find some of my greatest joys.

Happiness is a ray of sunshine between two clouds, someone has said. The beauty of passing happiness is mine to enjoy at thirty. Younger, one wants the divine dance to last not all night, but forever, forgetting that it takes many hours when there are no dances on the program to make possible that one divine hour of dancing.

God, and religion? At thirty God is an informal father to me, to whom I can take the difficulties of my days that no one else could ever understand. God is very good to me, for always when I need aid, in those crises that will come to everyone, he has never failed me. When I need spiritual aid, moral strength and guidance, and ask that friendly God of mine for it I always receive it.

In my early twenties I was ill for long weary months, an illness from which I have not yet recovered, and from which doctors say I will never entirely recover. The fear of death was very strong within me in those early days of my illness. But through months of calm thought while I lay ill I learned to think of death in what I think is the right way—the natural end of a period of growth here that somewhere, I know not where, will be taken up again.

The thought of interment maddened me in those days of critical illness. Gradually I learned to think of it as sleeping quietly, held close in the earth mother's warm arms, while above me green grass and bright flowers would bloom, the birds would sing, and the sun would rise in the east, journey through the sky and set in the west when the day was done, its bright rays that I had loved in life, always shining there just above me.

However wrong I may be these thoughts bring me peace of mind. I am glad that thirty has brought me this sun-warmed thought of death.

Illness brought me—for no story of my growing up to thirty would be complete without the story of that illness of mine—a happy view of death. It also taught me understanding and sympathy.

I may find an old lady's account of her illness boring—they usually are but I listen now, because I know that to her the trouble is very near and real.

Work that I have loved, because out of all the possible things I might have done I chose to learn to write—I do not say write, but learn to write—has kept my soul steady on its keel through moments when the storms on the sea of my life threatened to swamp the craft. Through opposition, disappointment in both work and love, discouragement, illness, soul battles, and often ignorance and stupidity, I have gone steadily on toward my goal, working toward the thing I want most of all—to be a real writer.

I have grown enough in my work that when I have to resort—as I occasionally have to— to advertising in publishers' magazines, now I can advertise: "Eight years experience, three successful years editing and managing small publication, feature article writer, general reporter."

Not much, but that is another thing the years bring, the worth of accumulated months and years of experience in one particular line of work.

An appreciation of the extra compensations of work, those pleasant little things that grow up out of business relations and connections, is one of the things from which I derive much genuine satisfaction.

Grown up to thirty I am looking calmly down the decade before me before I reach forty. I am not worrying about forty. The forties will take care of themselves when they arrive. You can't plan your life and expect it to work out the way you plan it. You've got to mind your own business, and keep plugging along, be it for the time, or the years.

It has taken me three decades of growth to grow up to thirty. Ten

more years of growth of work, of constructive dreaming—for dreaming that is not constructive is only a pleasant pastime—and when I've grown up to forty perhaps I shall be the real writer than I want to be at thirty, but am not. But always there will be something else I want to do.

I hope I die "with my boots on" notebook and pencil in hand, a typewriter handy, working on that last story that may or may not live for posterity.

And out of it all, at thirty, it seems to me that this is the only real thing:

God sent to one, a storm, days of sorrow, pain and disappointment. Ruthlessly he smashed cherished plans and hopes. A body that had been tall and strong was laid low in illness and pain, and there were long, weary, heart-breaking months of waiting.

He gave courage, hope, strength to meet the storm of sorrow and disappointment. He gave some friends, who loved, who cheered, who understood. After weary months he brought an ill, pain ridden body back to health, and gave new tasks—and God made a soul!

WATER

Of all curative agencies, water is the most universal, the most versatile; in general, the most potent, at the same time the most simple in its modes of application, and yet capable of the most highly specialized and technical adaptations.

Said Claude Bernard, the great French biologist, "All life is under water." Underneath the skin, all the cells and tissues of the body are submerged in the blood and other liquids. We think under water. The heart, liver and muscles, the stomach—all our organs—do their work under water. In fact, we "live and move and have our being" under water."—Good Health.

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

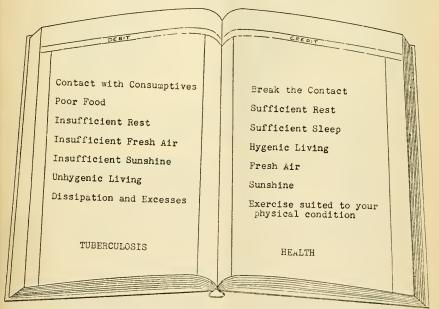
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NO 11

WHAT NORTH CAROLINA MAKES MAKES NORTH CAROLINA



In regard to this epigram of Governor Gardner, we would say that the most important thing that North Carolina makes is its citizens, present and future. Without them North Carolina would not make anything, nor be anything.

NORTH CAROLINA MAKES CITIZENS CITIZENS MAKE NORTH CAROLINA

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils
Cancer
Constipation
Colds
Clean-up Placards
Chickenpox
Diphtheria
Don't Spit Placards
Eyes
Flies
Fly Placards

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German Measles

Teeth
Tuberculosis
Tuberculosis Placards
Typhoid Fever
Typhoid Placards
Venereal Diseases
Water Supplies
Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C.:

Prenatal Care (by Mrs. Max West)
"Our Babies"
Prenatal Letters (series of nine
monthly letters)
Minimum Standards of Prenatal Care
What Builds Babies?
Breast Feeding
Sunlight for Babies
Hints to North Carolina Mothers Who
Want Better Babies
Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6 years of age).

years of age).
Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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THE CONTROL OF TUBERCULOSIS BY A COUNTY

We are glad to print in this issue, papers read before the Annual Conference on Tuberculosis held by the North Carolina Tuberculosis Association at Salisbury, August 7th, 1930, which sets forth a county plan adopted by Forsyth County for the control of tuberculosis. The plan is good, and has the approval of about every organization that one would think of as being interested.

When an important piece of work, as this is, is attempted there are two important things to do:

- 1. Plan your work.
- 2. Work your plan.

In this instance the work is well planned, and every one in North Car-

olina and elsewhere interested in health work and particularly in the control of tuberculosis, will watch with eager interest the working out of the plan.

We are also using as the first article in this Bulletin, resolutions passed by the State Conference on Tuberculosis above referred to. The North Carolina Tuberculosis Association has always claimed, and rightly so, that the fight against tuberculosis is everybody's fight.

The North Carolina Tuberculosis Association has rendered and continues to render conspicuous service to the people of our state.

G. M. COOPER, Editor.

RESOLUTIONS ADOPTED BY THE STATE CONFERENCE ON TUBERCULOSIS

SALISBURY, AUGUST 7th, 1930

- 1. We congratulate the people of our state, and express appreciation to the National and State Tuberculosis Associations, State Sanatorium and State Board of Health, including local Health Departments, over the constantly decreasing number of deaths and number of cases of illness on account of tuberculosis, over a goodly number of years. We also congratulate the people of our state on the immense economic saving incident thereto.
- 2. We desire to record our approval and appreciation of the research work done in tuberculosis, initiated and directed by the National Tuber-

culosis Association and largely financed by the National Tuberculosis Association from the sale of Christmas Seals. It is stated on reliable authority that we now have sufficient knowledge, if it were made concrete among all the people, to drive tuberculosis from our state and nation. It has been truly said that tuberculosis is "everybody's fight," and we sincerely request co-operation of every organization, every official, every man, woman and child in North Carolina in finishing the fight against tuberculosis in our state.

3. In times of stress, whether war, pestilence, famine, financial, unem-

ploment, or what not, the tendency is for tuberculosis to show a marked increase both in number of cases and number of deaths. During the World War some of the European nations showed more than 300% increase.

It therefore behooves us and the people of the state to enter more heartily, more enthusiastically, and more efficiently into the fight against tuberculosis than we have ever done, and our efforts should be directed toward the prevention of infection and keeping the bodies of our citizens, particularly our children, in at least a normal state of nutrition and we must find the cases and treat those in need of it.

The Annual Seal Sale from Thanksgiving to Christmas is a splendid outlet for our energies, as its main object is to carry on these very things.

In this connection we desire to express our regret that in the 20% cut in appropriations found necessary by our State Budget Commission, it has been made to apply to the State Department of Health including County Health Departments and tuberculosis work. Appropriations for these things should be increased rather than decreased, particularly in times of depression. The County Health Departments should be enlarged and extended rather than decreased and curtailed, and we express the hope that a way will be found to do this. Why should we pay county and state taxes for education and curtail the appropriations to health and tuberculosis work, thereby increasing the number who are unable to attend school and the number who though able to attend school are unable to pass their grades. We might ask which is the more important, the child or the education we try to give him?

4. We approve wholeheartedly the plan of tuberculosis control with the county as the unit, as presented to this Conference at the session this afternoon and we express the hope that every county Health Department

in this state adopt and put into effect this program, and that all other counties so unfortunate as not to have the services of a health department, put into effect such parts of the program as may be possible. It is recommended that all and every county undertaking this completed program or any part of it, or any tuberculosis program, secure the of experts and particularly the North Carolina Tuberculosis Association, and through it, the National Tuberculosis Association and the Carolina Sanatorium.

- 5. We approve of the splendid work of the North Carolina Sanatorium including its extension department, which has been and is receiving national and internatonal recognition and approval. And we request the authorities to relieve the extension department of the 20% cut for this year and the general assembly to increase this appropriation for the next biennium.
- 6. Nutrition: Possibly we can afford to have our real estate sold by foreclosure, or for taxes, but we cannot afford to be sick nor can the state afford to have its citizens sick, and least of all can the state afford to have its citizens ill with tuberculosis, and particularly is this true in times of financal depression and unemployment, for the reason that tuberculosis is the most expensive disease that any one can die from or get well of, in fact, tuberculosis costs the state more than all other preventable diseases combined.

As the proper nutrition of the body enables it to resist casual infections from tuberculosis and all other diseases, and plays such an important part in the recovery of a person after the infection has become disease, we desire to express our appreciation of the teaching and practical demonstrations along this line by the Home Economics teachers and Home Demonstration Agents, and to say further that we need them more to-

day and we need more of them today than any time in the life of any of us now living. In this connection may we give expression of our appreciation of the valuable aid in this matter given by the parent-teachers associations, the Departments of Education as a whole, and many other organized groups in our state.

While this Conference has no intention of entering into a detailed scientific discussion of nutrition or the subject of diet in connection therewith, we do feel that we should refer to milk as the most important single article of diet and recommend its use in every home.

7. The Welfare Officer: This officer necessarily comes in close and frequent contact with Tuberculosis, for this disease attacking the head of a family destroys, both financially and physically. This contact brings about a deep and intelligent interest on the part of the Welfare Officer, and as naturally follows creates a desire for the prevention of the disease.

It is not at all infrequent that the Welfare Officer, in the absence of a Health Department, heads up and promotes the tuberculosis clinics for both children and adults and frequently the sale of Christmas seals. Their interest and activity are greatly appreciated and commended.

8. The Women's Clubs: We must make special reference to the cooperation of the Women's Clubs. Where there is no organized Tuberculosis Association in a county, the Women's Clubs through their Health Departments have organized and conducted the Seal Sale and followed through in a wise expenditure of the 75% left with them, and this is the case in the majority of the counties.

Examples of Accomplishments: One club co-operated with the North Carolina Tuberculosis Association in bringing the first Public Health nurse to North Carolina and from this a State Director of Public

Health Nursing followed. Numerous others have followed this lead and are now helping with public health nursing in their local cities and counties and in many instances having been wholly responsible for establishing this service, always using the Seal Sale funds for financing same. Another, through its President established a county-wide organization which they named the County Health and Welfare Association, and this fine organization a little later established a good Health Department in this county. Another has recently bought a tract of land and erected a Tuberculosis Camp with a capacity of thirty and is now planning to double the capacity for next year.

Every County Tuberculosis Association and every Seal Sale organization whether or not it be the Women's Clubs have aided largely with nutrition and health habit formation, among the school children and many have financed the x-ray films used in the children's clinics of the Extension Department of the North Carolina Sanatorium.

9. Kiddy Kamp—Preventorium: The first preventorium in North Carolina was established by the Cumberland



County Tuberculosis Association and it is nothing but justice to say that Miss Lucia Freeman, Red Cross nurse at Fayetteville, was the moving spirit and largely responsible for the inception and success of the undertaking. This was conducted the year round, and that idea is something for us to think about in connection with this work today. Salisbury and Rowan County three years ago began the splendid work we have seen today. It is impossible to compute the value of this initial work.

It is a pleasure to invite your attention to the fact that there are at this moment five of these preventoriums in operation in our state, Rowan, Cabarrus, Davidson, Durham and the newest one Gaston, and there are in the neighborhood of 200 children being cared for in these five camps. There are also three children's divisions of County Sanatoriums, Mecklenburg, Guilford, Forsyth and Sanatorium, Catawba, Children's where about 160 children are being cared for, and the children's division of our State Sanatorium, with a capacity of 70, making a grand total of 430 children that are being treated at this time. The discharge and admissions from State and County Sanatoriums would make a total of 660 to 700 children being treated annually in camps and sanatoriums. This is coming a "far piece" in four years, but it is only an indication of what we ought to do and an earnest of what we will do.

10. Open Air Schools: While open air schools have been in more or less general use in the New England States, thanks to our State Department of Education and particularly Mr. Blair, who had immediate supervision of the planning and architecture of our school buildings, we do not need open air schools, but we do need to use the ventilation provided which in some instances we are informed and believe is not used.

11. The 5% Must Be Cared For:

The County Health Departments and schools with such help as they may be able to obtain must assume the responsibility for properly caring for 2,500 children out of the 50,000 examined by the Children's Clinics of the Extension Department of the State Sanatorium. There are about 5% of the school children in the state, or a total of 45,000 in round numbers, though only 2,500 have been found, that will come within this classification. These have been found infected with tuberculosis, but are not sufficiently ill to be in need of treatment in a Sanatorium, but if not properly cared for will no doubt account for the cases in the next few years, and particularly the cases of adult tuberculosis from the teen age to twentyfive years. The proper way to care for them is; (1) to find all defects and have them remedied; (2) find all diseases and have them cured; (3) stop whoever has been infecting them from doing so; (4) keep them in A-1 physical condition by nutrition classes and health habit classes in schools. It is apparent that each of these four measures will require the co-operation of a physician. The summer camp will be of great help also.

12. Sanatorium Treatment: and five-tenths per cent of the 65,000 examined are in need of Sanatorium treatment, though if the camp were conducted over a period of say ten months in the year, many of these could be treated there. That means that 900 out of the 65,000 examined are in need of sanatorium treatment and that 1.5% of 900,000 school children or 13,500 children in the state are in need of Sanatorium treatment today, while the state and county sanatoriums including Catawba County can only treat about 500 to 700 children annually.

13. The Pre-School Child: There is infection in the pre-school children, just how much we do not know, for studies of this age group have not been made in our state. The Parent-

Teachers Association are interested in this group, especially the five year olds, and they with the Health Department, the Clinic physician and the private physician should care for them. When the plan of control outlined and discussed this afternoon is put into effect this group will be

cared for. Many of these who now die can be saved.

14. Name for Camp—Preventorium: Many different names are used for the summer camp or tuberculosis camp even in these resolutions, but we recommend that the official name be Preventorium.

PROGRAM FOR THE CONTROL OF TUBERCULOSIS IN FORSYTH COUNTY

By
P. A. YODER, M. D.
Superintendent Forsyth County Sanatorium

(Editorial Note: Approved by State Sanatorium for the Treatment of Tuberculosis, P. P. McCain, M. D., Superintendent; most heartily approved by North Carolina Tuberculosis Association, L. B. McBrayer, M. D., Managing Director; cordially approved by National Tuberculosis Association, Kendall Emerson, M. D., Managing Director; unanimously approved by Forsyth County Medical Society.)

Cooperation. There should be the closest cooperation between the Sanatorium and the Health Departments, the superintendents of schools, principals and teachers, the social welfare agencies, the local tuberculosis association. The help of the State Sanatorium may be needed at times and of course cooperation will be forthcoming. Cooperation individually and collectively on the part of all the physicians of Forsyth County is very vitally needed. In fact there should be cooperation of all the people of all ages if the tuberculosis program is to be a success—and success is meant the finding of cases of tuberculosis within the borders of the county, administering the treatment needed, putting into effect the known methods of prevention and following them for a long period of years.

Case Finding. The principal sources for discovering the cases of tuberculosis are the practicing physicians, the health departments, the clinics, the field nurses, the various welfare agencies, etc.

The general program for the tuber-

culosis campaign should head up in the sanatorium and the Sanatorium Superintendent, the other agencies consulting him and working closely with the institution.

Reporting Cases of Tuberculosis.

All cases of tuberculosis discovered in the County are to be reported to the County Health Officer and all city cases be reported to the City Health Officer, they in turn will report all cases once each month to the Sanatorium.

Examination of Contacts. All members of the household in which a case of tuberculosis is discovered, family and employees, should be given the tuberculin test; all positive adult reactors to be given a physical examination and all positive children reactors to be given physical and x-ray examinations.

When a case of tuberculosis is found in an adult every member of the family should be examined in order to ascertain and care for those in the family who have been infected by this adult, and the infecting adult should be isolated from the family, preferably in the Sanatorium. When

tuberculosis is found in a child every member of the family should be examined in order to ascertain and remove and treat the person responsible for the infection of the child and find and care for others in the family who may also be infected.

Clinics. The City Health Department clinic should be continued. The superintendent of the Sanatorium will conduct a clinic at the Sanatorium for the county cases and for whatever cases are referred to him by the physicians of the city and county.

The Sanatorium will make x-ray pictures of all cases who are found at the clinics to need x-ray films and who are not able to have pictures made by private roentgenologists.

tuberculosis Children's should be conducted in the schools:-The Health Department, the Superintendent of Sanatorium, and, if possible, volunteers from the Medical Society, cooperating. The tuberculin test should be given and the physical examination of the positive reactors made by physicians of the Health Departments and the Medical Society, and the x-ray films, one posteroanterior and one oblique, on each positive reactor, to be made by the Sanatorium x-ray department and the x-ray films to be read and the correlation of all the findings to be made by the Superintendent of the Sanatorium; the parents to be advised to take their children to their family physician for the correction of all defects that are found; those children classified as positive tuberculosis and active to be sent to the Sanatorium; those classified as positive but inactive and also those classified "suspicious" to be placed under the special supervision of school nurses and the teachers, and their family physician.

Sanatorium. The Sanatorium should have charge of the treatment of all cases of tuberculosis in the county except those who are treated by private physicians, and every person who has tuberculosis should remain under the care of the sanatorium until the final termination of the case, with the exceptions noted. Thorough records should be kept and all the records in regard to every patient in the County should be continuing and continuous for the period mentioned above and in addition family records should be kept where there is a case of tuberculosis. From time to time there will be much valuable information, which if properly correlated and interpreted may add to the sum total of the public knowledge in regard to the treatment and prevention of tuberculosis and such things should be published for the benefit of tuberculosis workers generally and people particularly.

The Sanatorium, with its capacity of 182 beds, should be adequate for all the needs of the county. All active cases who are unable to go to a private sanatorium should be sent to the County Sanatorium; all positive sputum cases should be received whether active or not for a period of at least two or three months, or long enough for them to be taught to practice the necessary precautions for the protection of others; cases that cannot be benefited and who can be cared for at home should be sent home, after learning to take the necessary precautions, such cases to be visited periodically by the Health ment nurses.

Sanatorium Superintendent. The Superintendent of the Sanatorium should be ready at all times to offer his services as consultant to every physician in the County and should make it possible for the physicians to come to the Sanatorium to observe methods used and to study clinical material available.

He should from time to time present papers on various phases of tuberculosis before the County Medical Society.

The Health Department. In a gen-

eral way the City and County Health Departments should have charge of the Health Education program as it relates to tuberculosis, the nursing program, the nutrition and health habit formation program and complete physical examination of the child other than for tuberculosis. Physical defects and diseased conditions, other than tuberculosis should discovered and corrected and in this there is needed the closest cooperation of sanatorium, Health Departments and private physicians.

The nutrition and health habit formation program should be carried on with every child, whether it is infected with tuberculosis or not.

Newspapers and Civic Clubs, A county-wide campaign to interest and inform the public should be carried on and the cooperation of the newspapers and the civic clubs, such as the Parent-Teacher Associations, the Women's Clubs, the Kiwanis, Rotary, Civitan, Lions, etc., be enlisted. this campaign the prevention early discovery of tuberculosis should be especially stressed, and that all who have suspicious symptoms should be urged to report to their private physicians for examination and that the private physician be requested to refer any questionable case to the Health Department or Sanatorium clinic.

The State Sanatorium. The Extension Department of the State Sanatorium offers its support in way possible to the furtherance of the Forsyth County Tuberculosis program. It will assist to the extent of its ability with both adult and children's school clinics. It will furnish much of the literature. In the event more active cases of tuberculosis should be discovered than can be cared for in the local sanatorium, the State Sanatorium will take the overflow for treatment, under the same conditions as patients from other counties.

Tuberculosis Association. Local,

State and National Tuberculosis Associations approve such a program for the control of tuberculosis in Forsyth County and will assist in every way possible with such program.

COMMENT

The County Sanatorium has a very important role to play if this plan is to work out successfully. Being the headquarters for all the elements of the County Antituberculosis Unit, it is evident that nothing less than a modern well equipped and first class institution in every respect must maintained. It must have beds enough to take care of the cases needing hospitalization; it must have serviceable x-ray equipment; it must have an operating room with apparatus for employing the different forms compression therapy; it must have an efficient clinical laboratory-in short it must be able to give to the man in bed the benefits accruing from scientific research, the blood-sweating thought, the diligent labor-that have piled up the mass of present day knowledge of tuberculosis.

An out patient department is necessary—where an accurate decision can be made regarding suspected cases as well as contacts of known cases. And where follow up work with discharged patients can be done. This service should be made available to patients through their family physicians or the public health organizations.

The Sanatorium should be the center for the dissemination of tuberculosis information for its district—working through the health departments, its personnel should make every effort to aid in educating the citizenry—especially in methods of prevention and early detection. It should also stimulate the interest of the practitioners in watching for early cases in their practices—and in doing something about it when a case is found or suspected.

Another important function is the

maintainance of contact between the elements of the county unit and the higher organizations of our antituberculosis army. The National Association, the State Association, and the State Sanatorium must have agencies connecting them with the individual workers—and it is up to the County Sanatoria and Tuberculosis Associations to serve as non-commissioned officers (so to speak) if we are to have an efficient and well disciplined army instead of an unorganized mob.

Along with all these shoulds there is also at least one very important should not. While we are of course first and chiefly concerned with the tuberculosis fight—still, we should not forget that we are one division of the forces striving for the betterment of all health conditions. And the county Tuberculosis institution should be so conducted as to fit its activities in with the general health program—lending a hand whenever possible in all phases of all the health work undertaken in its county.

A Tuberculosis Program Should Head Up At The Tuberculosis Sanatorium In Those Counties That Have A Sanatorium

By
J. ROY HEGE, M. D.
Health Officer Forsyth County

A few years ago, we of the Forsyth County Health Department prepared a recommended program of future Health work for the Women's Club, which was compiled and printed in pamphlet form by the Metropolitan Life Insurance Company for the General Federation of Women's Clubs. In this recommended program we stated as follows: With the completion of the New Tuberculosis Hospital a well organized tuberculosis program for the entire County including the City of Winston-Salem is needed-the director of this hospital should be the director of this program and should feel the entire responsibility of every case of tuberculosis in the County. The City and County Health Departments and all outside official and unofficial agencies should cooperate with the medical director of the hospital in promoting this program. To derive the most benefit from the hospital, the medical director should feel the responsibility of the field work as well as the care and treatment of the

patients at the institution. Some such program has been worked out and has the approval of the National Tuberculosis Association and the State Tuberculosis Association. The County Medical Society adopted it. I think all the necessary ground work been laid for a splendid piece work in Forsyth County. Such a program has unlimited possibilities toward the complete eradication of tuberculosis in our county and with such a goal in mind, if we will direct our combined activities to remove every obstacle that presents itself. shall in the course of a few years see the results of our efforts.

Let us consider in some detail the activities of the Health Departments in such a coordinated program against tuberculosis. First, let me say that we are not inaugurating this drive with any intensive mushroom enthusiasm. We are laying out a program with deliberation and determination to win the fight. We are digging in. We want trenches on the

front lines well fortified and protected against any onslaught or even insurrection. We want a well laid field infantry. We want some hand to hand activities. We will have a plenty of big guns in the rear ranks-some big Bertha's. We have several of them here today. They are very necessary in this war. It isn't the damage that these boys do to Tuberculosis that counts-its the influence they have on the morale of the field workers and their long range that really counts. You take today, these big guns will be heard in Manteo Murphy. The field workers in which we refer are the Public Health Nurses, the Associated Charity's Nurses and workers, the Metropolitan Nurses, the Junior League field workers, the Civic Club interests, the general practioners and the private duty nurses-Women's Clubs and many others too numerous to mention. They are the only ones that can and will win this battle. With this in mind, we propose in Forsyth County to all put ourselves at the order or command of our Hospital Director rather than to each and every agency attempt to direct his own activities. We feel that he is just as capable to direct a field program as he is an institution. We will go even farther than that, we don't believe that a public owned and operated Tuberculosis Hospital can serve the best interests of each and every citizen in the County, without the Medical Director having a full knowledge and authority to advise and direct the field cases. When he has a vacant bed in his hospital, he should have before him such information that would enable him to fill that vacant bed with the case that best adapts itself to general interests of the program. Gentlemen: I say this realizing that I'm opening the way for some interesting and worth while discussion, but any amount of discussion will not change the fact that the worst enemy that Tuberculosis has in North Carolina today is

the waiting list at the State Sanatorium and the County Sanatoria. The solution to this is a target for the Big Bertha's to focus their attention-Speaking as one of the field workers -But in terms of a Big Bertha, I would say more hospital beds, is the solution-But whose judgment would lead him to say so at this time of cutting and slashing of budgets and all kinds of curtailment, regardless of needs and demands. Speaking in terms of a field worker, I would suggest that the degree of advancement of the case should determine the status for admission and that that be drawn as close to incipient cases only, as the number of hospital beds demanded. I wish to apologize making this suggestion to Sanatoria superintendents. I make it because of my sincere regret and sympathy for early cases that progress to advanced involvement, while waiting to get into the Sanatoria. The field workers do all that can be done to protect the case from advancing, but as you know that is hard enough in the institution much less in the home of the case, where there is a thousand and one interests and demands to prevent the case from resting, relaxing and improving. Forsyth County Tuberculosis Hospital was planned with malition and intent to prevent an advanced case ever blocking the entrance of an incipient one. I would like to see every case admitted and remain long enough to be schooled in methods of sanitation, personal hygiene and the proper care of himself so that would take care of himself and protect those that he comes in contact with. Other than the waiting list, I know of nothing worse than making a County Home for Tuberculosis cases, out of a County Tuberculosis Sanatorium. It is about as unreasonable as it would be to hospitalize permanently all disabled veneral disease cases in a general hospital.

The field workers in the Health Departments are pleased to have the di-

rector of the hospital assist them with his suggestions and advice. Any information relative to a tuberculosis case that he desires, is gotten with pleasure. Any policies or plans that he and his board may adopt are looked upon with favor. The hospital board has on it both the city county health officers. The city has a special Tuberculosis Nurse that handles the tuberculosis problems in the city. The County has district nurses, eight in number, who do generalized public health duty and in their regular line of duty they handle the tuberculosis problems of the county. We recognize in the field two types of Tuberculosis, the childhood or Juvenile type and the Pulmonary type. In the homes of tuberculosis parents or relatives, where there are children we most usually find the Juvenile reactor. The Public Health worker finds that where school children react to the tuberculin test that the parents or a relative of the child has or has active pulmonary tuberculosis. These two types usually exist in the same home where there are children and susceptible adults. Where there are a sufficient number of field workers, all case contacts can be studied and worked out for the Hospital Director, also all school children can be examined and the tuberculin test reactors studied, which usually results in the finding of the donor of the infection.

In this age of enlightenment working with people with average intelligence one would naturally assume that when one informs an individual that he has tuberculosis. that workers duties would end and the individual would take such steps would be to his best interests as well as the best interests of his contacts, which are most often other members of his family. But there is most often a lot of work yet to be done before the individual will move along certain predetermined lines laid down by the Tuberculosis directors and workers.

Our program of controlling Tuberculosis in Forsyth County has splendid endorsement, but the individual with tuberculosis doesn't give anything except a cuss about that. The individual isn't concerned at all about your program, he is concerned only about himself, his family and his relatives. So the problem that confronts the worker is to appease an individual and his interests. This takes persistent work, forethought and tact on part of the worker. Sometimes these positive cases resort to a re-examination of their case by a less member of the medical profession. This sometimes puts the worker in an embarrassing position. About the only consolation the worker has in such a muddle is to remember that he who laughs last has adenoids.

The control of Tuberculosis in a



CHRISTMAS

with its joy and good will—why not extend its spirit over the whole year? The fund from the sale of Christmas seals in December will carry help and education against tuberculosis throughout all 1931.

The National, State & Local Tuberculosis
Associations of the United States

Buy Christmas Seals Fight Tuberculosis community resolves itself into about two major factors. First, finding the cases and second supervising them thereafter, both at home and in the Sanatorium. If these two factors are carried on in an efficient manner, the tuberculosis problem will be controlled. If they are partially carried on the tuberculosis problem will be partially controlled. How are we going to find the new cases of tuberculosis? The physicians will report some, the neighbors will report some far advanced cases, the nurses will some in making her home visits of one kind and another. We will find some through the routine examination of school children, Tuberculin test and subsequent investigation in the home of the positive reactors. Some will be found in making the ex-Sanatorium case follow up visits. There are no doubt other ways that some will be found. In all these various ways of finding cases, we are cooperating one with another in controlling Tuberculosis and so far as we are inefficient or dilatory in carrying out our obligations, so far we are falling short of controlling Tuberculosis.

The second factor deals with supervising or treating the case once we have found it. The burden of this activity rests upon the family physician and the hospital director. The worker here occupies the position of assistant to the physician. The degree of efficiency of the control measures depends upon the family physician's ability, skill and integrity. The trained worker will go the limit, which the physician allows. Some physicians desire a physical examination by the hospital director, x-ray examinations, etc., while others desire that no outside assistance be had and so "mote it be." Our field workers will even transport the cases or suspicious cases to the Sanatorium Clinic, which is held two mornings each week.

We need in Forsyth County to further our Tuberculosis control

measures: First, the colored division of our hospital, which is at present the old Tuberculosis hospital, moved to the site of the new hospital. It can be operated more economically and much more efficiently. Second, Dr. Yoder needs an assistant. should have more time to devote to Clinics and the study of the field activities. There are over a thousand cases of Tuberculosis outside hospital that needs supervision prophylaxis. His entire time could be well spent in the administration of the hospital and the supervision of clinics and field activities.

We need a colored worker to do special Tuberculosis work among the colored people, including the colored physicians. We are not getting same type of case into the colored division of our hospital as we are in the white. Dr. Carlton and I had planned to put on a worker of this kind this year, but since our budgets for this year have shrunk to the tune of a prune, we will have to abandon any such plan or even hope. We had in mind that such a worker working out from the colored hospital among the colored population and physicians that such contacts could be made which would give the hospital a less advanced colored case or even incipient colored cases. Some such plan might aid much in the control measures among the colored population, which is as you know most urgently in need of control. Without the aid of this colored worker, we will continue to do our best to get better cases into the colored division. The colored people are hard to get in during the incipient stage due to an impression that they have, that all cases going there for treatment die, and the sad part of it, it is true, for only the far advanced cases go and certainly the most of them die there.

Our tuberculosis control program will cost Forsyth County \$109,908.51 or .94% cents per capita for the fiscal year 1930-31. \$101,408.51 or .87%

cents per capita will be expended in the hospitalization of the tuberculous. \$8,500.00 or .071/4 cents will be spent in carrying on the field activities. This does not include the activities of the physicians, the worker, county physician and health officer, nor does the .94% cents include the expense of testing the dairy herds for Bovine Tuberculosis or the loss of the Bovine reactors of the herds, nor does it include the loss of earning power of the patient and his nurse or caretaker. The .871/2 cents expended in hospital care of the tuberculous applies to those cases only that are hospitalized, which in Forsyth County is about 135 out of a possible 1200 cases. Thus you see we have no idea of what Tuberculosis actually costs us. We only know approximately what we are spending to control it.

SUMMARY

We think that our hospital director with his broad experience in hospital treatment and clinical observations over the entire state has qualified himself to direct this program of prevention and treatment. We think he is just as interested in the prevention of new cases as he is the treat-

ment of existing cases. We wish to aid him in combating all present foci of infection and prevent the occurrence of future ones and when all is said and done, that is controlling Tuberculosis.

We realize as does our hospital director that in order to fight Tuberculosis, we must find the cases. The earlier the better. It is here that we field workers render our most valuable assistance. We desire to visit every case that is reported—study the new case and classify it and render all assistance we can in teaching personal hygiene and prophylaxis. We try to assist in making social and economical appraisals and adjustments

There is a qualification that a field worker should have aside from his scientific training, which cannot be measured by charts or statistics. We may call it the emotional quality. God forbid that we in our enthusiastic efforts to put across a drive or a program should allow success and efficiency to stand out so in our minds that we might become indifferent toward our patients and forget that a case is a human being or that a house is a home and the hope of the community lies in healthy happy families.

The Part Played By National, State and Local Tuberculosis Associations In A Tuberculosis Control Program and The Relation of the School System to Such Program

By
R. L. CARLTON, M. D.
City Health Officer, Winston-Salem

The fact that the National Tuberculosis Association, organized in 1904 when there were less than a dozen tuberculosis organizations, all told, in the entire United States, has so stimulated thought and activity in this line of work that there are now more than 1400 state and local tuberculosis organizations affiliated with the National and the additional fact that in these 26 years the tuberculosis death rate of this country has been more than cut in half, are sufficient evidence to convince the most skeptical that a tuberculosis program and organizations to carry it on have been vastly worth while.

National, State and local tuberculosis associations are engaged in the same thing-to attempt a description of the aims and activities of each of these would be to describe many things about three times. This does not mean duplication of effort however-but simply that one, the parent, directing, guiding organization is a little farther away from the firing line than are the others-that the State organization is the home base of supplies, advice and guidance and that the local is in direct every day, personal contact with tuberculosis and all its devious problems, is on the firing line of battle, if you will, and is dependent upon State and National for much ammunition, advice, encouragement, instruction.

Therefore what I have to say will of necessity be very general concerning what the organizations designated as National, State or Local have to do with a Tuberculosis Control program.

The program, already discussed, covers, in brief, treatment of the sick, detection of cases, prevention of disease by promoting positive health conditions, prevention of infection by discovering sources and breaking contacts, making economic adjustments for patient and dependents, etc. You are all familiar with these the fundamental activities of the program. The National Tuberculosis Association and every one of its affiliated organizations are constantly at work on every one of them.

All these fundamentals "seem simple enough and their recital rolls off the tongue glibly," said Dr. Allen K. Krause a few years ago at a conference in Pennsylvania. "But," Dr. Krause said, "think of what effort they involve: the construction and equipment of hundreds, perhaps thousands of places for the afflicted; the making over of countless homes for the same purpose; the special educa-

tion and training of thousands of physicians and nurses to attend these unfortunates: the continued instruction of the entire practicing medical profession in the detection of early tuberculosis and the proper appraisal of active tuberculosis; the arousing of every man and woman to the real condition of affairs; the enormously difficult—and often discouraging task of breaking through their prejudices and having them put aside age-long habits and customs; the introduction of the masses to new standards of living-and what is just as important -the adaptation of these to economic and social conditions; the establishment of sympathetic relations-those of minister to body, soul and perhaps purse in hovel, cottage and mansion: the devoted study and investigation of tuberculosis in the even quiet of the laboratory, the grim reality of the bedside and the hurly-burly of the affairs of man; sanatoria, preventoria, dispensaries, clinics, schools, physicians, nurses, field workers, students, laboratories, streets clean, homes spacious and light, milk without seeds of disease, cattle healthy, an informed and reformed public intelligence and conscience: all these are but a few of the countless details that enter into the elements of a successful tuberculosis program: all and many more must be devised and tried and applied and fitted each in proper place."

All of these items are just as important and just as appropriate in the program as they were a few years ago when enumerated by Dr. Krause.



Boiled down—the thing that is taking the grip out of tuberculosis, that is literally "knocking the spots out of it"—now and always is education—knowledge.

The managing director of the National Tuberculosis Association said at the annual meeting in Memphis in May that the work of that organization may be classified under three headings:

- 1. Acquisition of knowledge about tuberculosis.
- 2. Dissemination and application of such knowledge.
- 3. Fund raising to achieve these two ends.

This acquiring of knowledge about tuberculosis implies, as I have already quoted Dr. Krause as saying, the education of doctors, nurses, teachers and every health worker having anything to do with that disease.

In this field there has been no more important nor far-reaching activity than the work of the Medical search Committee which the National organization established seven years ago. This committee under the leadership of Dr. William Charles White and other eminent scientists made very important findings which will assist doctors in the early and more accurate diagnosis of tuberculosis. They are devoting their lives trying to find out the still unknown fundamental problems of this disease. Why is the tubercle bacillus harmless in one individual or one family? Why are some people chronic invalids who apparently have had no more tubercle bacilli introduced into their bodies than others who remain well? Why does one individual recover and remain well? Why does another in apparently good health become rapidly ill and the illness become more grave resulting in chronic tuberculosis, with ultimate death? some serum or vaccine be found which will prevent tuberculosis? At least twenty-one scientific bodies, including

the U. S. P. H. Service, National Research Council, Henry Phipps Institute, the Rockefeller Institute, several universities and biologic laboratories are working with this research committee on just such questions. Grants of money from the National Tuberculosis Association make possible much of this work. Such an activity would obviously be an impossibility for State or local organizations-but these immediately derive benefit from the results of the work of the scientists on the National Organization's committee.

Other efforts of the parent organization are devoted to social research. Why has not the tuberculosis death rate for men in industry declined as rapidly as for other groups? Why do young women between the ages of 15 and 25 have a higher tuberculosis death rate than other age groups? Why does the negro death rate from this disease not come down as it has for the white race? These and other questions are being intensively and minutely studied from a good many angles and just as rapidly as information of value is gleaned from surveys and studies it is passed on to the affiliated associations for practical application.

Demonstrations at various places have been participated in by the National Association. That one at Framingham, Massachusetts, some years ago has served as a measuring stick for the intelligent guidance of many programs in many sections of the country. There is a demonstration under way at this time in the schools of Lynn, Mass. It is expected to continue for three years, at the end of which time there may be available facts and comparisons of value to all of us.

One of the means of interpreting to tuberculosis workers the facts developed by these demonstrations and studies is by various publications—for example, the booklet "Childhood Type of Tuberculosis" issued recently

by the National organization is one of the most instructive and interesting pieces of information available; Tuberculosis Abstracts, a leaflet published monthly for physicians is of value; The American Review of Tuberculosis, a technical journal for specialists, is very helpful.

Another thing of great value to the tuberculosis campaign is the training of tuberculosis workers by an expert of the National Association who holds institutes at various points in the country. Many hundreds of secretaries. staff members. board members, social workers, workers, and nurses have benefitted greatly and been made more efficient for their work by these institutes. Another thing the National does is to take junior staff members into their organization, train them thoroughly and then let them go into the field as secretaries or directors of campaigns. Such activities are peculiarly those of the National Tuberculosis Association-State and Local organizations not being in position to attempt such things as the publication of scientific journals for the assistance of workers nor for the training of workers themselves.

The practical every-day application of the knowledge we have regarding tuberculosis must depend on State and local associations. The National organization renders available common materials for education, lays plans, conducts demonstrations, etc., but the local organization must persuade the man in the street.

The Early Diagnosis Campaigns which have been conducted for the last three years are splendid examples of the cooperative efforts of these various associations. The 1928 slogan—"You may have tuberculosis—let your doctor decide"—followed by 1929 which emphasized—"Early Discovery—Early Recovery"—and the slogan of this ear—"Protect the Children from Tuberculosis" have led many thousands of persons to seek

an examination and medical advice. Cases of tuberculosis have been discovered and put on the proper paths to recovery. Children have been saved from the disease. Results have been achieved because the National Tuberculosis Association popularized movement by producing and distributing millions of leaflets, pamphlets and posters; by newspaper and magazine advertisements; by newspaper publicity; by securing the cooperation of companies which do much advertising—one insurance alone causing to be carried full page advertising in magazines reaching 21,000,000; the backs of millions of letters carried a sticker on which was pictured the tousled head of a baby asking to be "protected;" bill boards on every hill and in every glade mentioned it. In short there was no excuse for any one to be ignorant of the fact that tuberculosis exists and that something ought to be about it-and that's where State and local organizations got in their work. It was their duty to inform directly the complaining man as to where he might go for an examination and what to do if trouble were found. It was their function to find the contacts and direct them to their physician or a clinic. Already in many places there had been provided largely because of first hand information delivered by the local and State associations, clinics, nurses, social workers, doctors really and truly interested in tuberculosis, sanatoria, preventoria, camps. So, the National Association stimulates a general interest by nation-wide publicity concerning tuberculosis, its early diagnosis, etc., and the state and local organizations actually seek out those persons who have the disease and tell them how they may be cured and how others may be protected from it-and while they are doing this they do not neglect other features of the health program, but they teach children good health habits; they instruct about the importance of heart defects, of diseased tonsils, of underweight and the correction of such conditions; they have to do with housing and working conditions, with the economic affairs of the family—in fact a tuberculosis program is not a complete program if it leaves out any part of a general worth-while public health program.

If a sanatorium, a preventorium or a children's camp is needed for the community it is not the National Association nor the official health agency as a rule which first stirs public sentiment to the point of making such provision—but generally it the local tuberculosis organization which takes the lead and, as Dr. Linsly Williams said, "pesters" a group of leading citizens until something is done. If a clinic or a public health nurse or special nutrition worker in the schools is the need frequently it is the logical organization to make possible such activity as a demonstration and carry it along for a time until it can be taken over by the gov. ernmental health agency. Such things have been done over and over again in many parts of this country.

Now, to finance these matters of finding out about tuberculosis and of how to practically apply that knowledge, all these organizations again found working closely together. National, State and local depend very largely upon the receipts from the sale of Christmas seals to keep their work going. Here, as in other lines, the National acts as a clearing house and source of supply for the various things needed in the seal sale campaign. The National Organization furnishes the seals, much of the publicity material, news artricles, stories, stunts, advertising in thousands of periodicals, and succeeds in attracting nation-wide attention to the fact that Christmas seals must be bought if certain much needed things are to be done-and then all that is left for State and local organizations to do is merely to deliver the seals and collect for them.

A seal sale that has grown from three thousand dollars to more than five million in not many years must have some merit and must have back of it some hard-headed business planning and study as well.

Let me lay aside generalities now for a moment to mention the North Tuberculosis Association specifically. It has had something to do with most of the worthwhile health activities of our State. Time will not permit detailed comment but North Carolina folks should not forget the pioneer work done by our Association in public health nursing in this State; nor should they overlook the health education work so well carried on; nor should they fail to recognize the splendid work carried on with the negroes of North Carolina, Our Association did pioneer work in providing extension service for the Bureau of Tuberculosis of the State-demonstrating in no uncertain terms value of this activity which was finally taken over by the Bureau. Every North Carolinian should be proud of the record this extension service under the direction of Dr. McCain making. To have finished examinations of more than 50,000 children and have the findings of 40,000 of them classified and intelligently recorded is a piece of work of decided value. The North Carolina Tuberculosis Association is proud to have had a part in the beginning of this admirable piece of work. Our association has had an influence in various pieces of legislation for the benefit of the tuberculous and has had a hand in helping mould favorable public opinion in more than one county in this state leading to the provision of hospitals and sanatoria. It has had much to do with the establishment of intelligent nutrition and other health teaching in our schools.

And this brings me to a consideration of the last part of my subject: the relation of the school system to the tuberculosis program, which part will have to await a future paper.

Let me in conclusion say with my friend and co-worker Dr. David Lyman of Connecticut, that, "we have great need to take counsel together, to pool our resources to see which group can best take charge of a given problem and how all the rest of us can best help, to lose sight of where the credit goes, and to work together for the greatest public benefit with the least duplication of effort and the least waste of resources.

We have found that the intrenchments of our enemy are so widespread we must ally ourselves with all other forces working for public health and welfare in its broadest sense. All the efforts of our National Association, with its great affiliated state associations, are being directed toward this goal and we are confident that in the next decade,

If we can dream and not make dreams our master,

If we can think and not make thoughts our aim,

If we can meet with triumph or disaster

And treat those two imposters just the same,

the victory will be ours together."

The Responsibility Of The Physician In The Program Of Tuberculosis Control

By S. D. CRAIG, M. D., F. A. C. P. Winston-Salem

The early diagnosis of pulmonary tuberculosis is a responsibility that the physician should take most seriously. We are confronted with the fact that tuberculosis claims the lives of more than seventy-five thousand citizens of our country yearly. We have with us something like two million cases, and a large percentage of these cases can, by early diagnosis, be arrested to the point that they can carry on their usual occupations. Economically, think of the loss, for the majority of these cases die at the age when their production should be at its highest level.

The diagnosis of early tuberculosis is not easy, especially what we term incipient tuberculosis, but by painstaking securing of history and most careful physical examination we will allow a very small percentage of cases to escape detection.

The general practitioner is a good diagnostician, and it is frequently due

to his being in a hurry from over work or from being so exhausted that he allows cases to slip by without detecting. As it does require most acute attention and the best that is in us to decide about some of these cases, it is wise to have a patient return when we can give more time or when our senses are more acute after rest. In fact it is frequently necessary to have them to come back several times, if you haven't all the necessary equipment, x-ray, etc., at your disposal.

It is the duty of every general practitioner to refer his doubtful cases to one who has had special training in diseases of chest, and equipped to make laboratory and x-ray studies that the busy general practitioner, even if trained would not have the time to devote to an exhaustive study of these doubtful cases. It so happens in a great many counties in our state that we are fortunate enough to have

County Sanatoriums well equipped with personnel, laboratory and x-ray to decide about these border cases. These County Sanatoriums have been of great service in relieving the State Sanatorium staff, who have been and still are overworked. I would like to speak at this point of the wonderful assistance the Forsyth County Tuberculosis Sanatorium has been to those of us living in Forsyth County. In fact. I now wonder how we have ever gotten along without it. For a practitioner to refer his cases for diagnosis to a Sanatorium, or State health clinic it is necessary that these institutions be in charge of doctors who positively know their work, and command the confidence of the general practitioner. So far as I have been able to observe and know, we have all that could be desired in the personnel of our State and County Sanatoriums.

The family physician's duty does not end with his diagnosis of tuberculosis; it is his duty to recommend that every member of a family, any others who have been living in close contact with the case that diagnoses should have an examination to be sure that they are not also harboring the tubercule bacilli. Since private physicians cannot ethically solicit patronage, if his suggestions are not carried out, it is his duty, (as we are living in an age of preventive medicine) to get in touch with his city or county health department and get their assistance in a diplomatic way in having them to go to their family physician for such examination. This is not done, as some individual may think, to give the doctor work, or put money in his pocket, but from a humanitarian standpoint.

The greatest and most certain step in the eradication oftuberculosis has been started in the last five years, and that is the diagnosis and treatment of childhood type of tuberculosis. Our State should be proud of the fact that Dr. P. P. McCain, is one of the pioneers in this work, and has done a great deal to advance our knowledge in the diagnosis and treatment of same.

As this is such an important and vital field, if we hope to ever wipe tuberculosis out of the land, the physician should acquaint himself with the latest in the diagnosis and treatment of the childhood type of tuberculosis.

The diagnosis depends upon the consideration of the following factors. History, Symptoms, Physical signs, Tuberculin test, and x-ray study.

A careful history in diagnosis of all diseases is important, but this is especially true in childhood tuberculosis. Statistics show that the proportion of cases found in children that give a definite history of close contact in comparison to those that have not been closely exposed is 8 to 1.

Regarding symptoms in children, probably the most outstanding one is that they tire easily. They may, or may not be underweight, if they only have a tracheobronchial gland involvement they may not cough at all. Fever in children is a very uncertain symptom I believe the records of the clinic of Winston-Salem health department will show that practically every child under ten years of age will have a temperature of several fifths of a degree when presented for examination.

Personally, I must admit that I have not the confidence in my physical findings in examination of children that I should have. Of course if there is an infiltration or consolidation of lung tissue, or a pleurisy with, or without effusion this is not so difficult, but so far as making a diagnosis when you only have a tracheobronchial gland involvement, I perfer the diagnosis being made from x-ray study.

Regarding the tuberculin test I think the men who are doing work in tuberculosis probably have more

faith in the tuberculin test then they had some years ago. The intracutaneous (Hantou test) tuberculin test is now being used in preference to the Von Pirquet test; first because it is more accurate and can be given faster by those who are conducting clinics. A positive reaction to tuberculin test always means infection with tubercle bacilli, but does not necessary indicate disease. It will, of course, not tell you either whether it is latent or active.

Every case that gives a positive tuberculin reaction should be x-rayed. The private physician can make the physical examination, the laboratory, tuberculin and other tests, but unless he has had years of training in x-ray work he cannot make a diagnosis from x-ray standpoint. Any person with an x-ray can make a picture, though the technique of making the x-ray of the chest is very important, but it takes a lot of training and experience to interpret what the plate shows and if the public could be educated to this fact they would be more than careful who does their x-ray work. I think a diagnosis from x-ray study that is not made by trained eyes is very harmful and very misleading.

The diseases that stimulate child-hood type of tuberculosis and frequently require a differential diagnosis are: Hodgkins disease, bronchopneumonia, pulmonary abscess, bronchiectasis, mediastinal abscess, enlarged thymus, and neoplasms. I think abscess following tonsillectomy more frequent than we recognize.

While I am on the subject of child-hood type tuberculosis I am going to speak briefly of the treatment. This does not differ from that of the adult; rest, fresh air, good food and sunlight. This treatment may be taken at home but I think the training at an institution is of great value. Those that have no open lesion need not be excluded from school.

Children, or so far as that is concerned adults, with a latent diffuse tuberculous pulmonary infiltration should not be given cold vaccines, typhoid, or other vaccines without careful consideration of each individual case by the physician. I am sure when I was in the army and we used vaccines of all kinds rather freely we frequently caused activity in cases of quiescent tuberculosis. Another point worth mentioning is the necessity of careful examining chest of patient before a tonsillectomy, especially in cases that come to the doctor complaining of becoming fatigued easily, some loss of weight, running a little fever, no appetite and may or may not cough. I believe I see on the average several cases a month, that have given a history of this kind and were told to have tonsils out. A month or so after their operation they will notice they are still no better and probably the other has caused chest condition to become more aggravated, so they seek further cause for their not feeling so well. By this time the diagnosis is easily made, but it would have been so much better if condition had been found before operation, so if tonsils really needed removal it could have been done under local anaesthesia.

The physician in private work should, as a rule, devote more time to the examination of his patients. To devote more time will be more satisfactory to both physician and patient, even if patient is charged a larger fee.

A record should be kept of all cases, this especially true of chest examinations. On the history and examination sheet have a diagram of the chest upon which to note findings. The signs for recording physical findings are very much the same in all chest clinics. The State Sanatorium, I am sure, will gladly send you a copy of the form they use, which is very satisfactory.

Before proceeding with the physical examination of patient get a very careful history of case, question pa-

tient carefully regarding family history, his past history, his exposure to tuberculosis, and his present illness. In questioning him regarding his present illness go into detail regarding loss of weight, fever, cough, expectoration, pleurisy, pneumonia, hemoptysis, night sweats, dyspnoea, loss of appetite, digestion, diarrhea, chills, etc.

In beginning the physical examination the patient should be stripped to the waist line. He can either be seated or stand for examination as the examiner prefers. When examining front of chest, patients arms should hang loosly by his side. When examining back have him to lean forward with shoulders drooping. The axilla can best be examined with hands upon the head.

The successful practice of the art of physical diagnosis is dependent to a large extent on very careful inspection. This is best done with patient sitting or standing in a good light. Note whether pupils equal or flushed. A dilated pupil or flushed cheek are commonly associated with tuberculosis of the lungs; occurring on the affected side. The thyroid gland should be examined for it is sometime necessary to have a metabolism test to help clear up differential diagnosis between a hyperthyroid condition and an incipient pulmonary tuberculosis.

The following points should be noted in the chest inspection: (1) Whether there is any drooping of either shoulder. (2) Whether one clavicle more prominent than the other and whether some flattening beneath the clavicle. (3) Whether there is on inspection any lagging beneath the clavicle. (4) Posteriorly the angles of the scapula should be watched to see if one moves outward less than the other.

When the diminution of expansion is very slight one may not be quite sure from inspection as to whether the two apices expand equally or not. Palpation is a more delicate method and usually helps us to decide positively. The method most commonly used in palpation is to sit in front of the patient with the hands placed beneath the clavicles. In this way movement of hands can be watched or by closing the eyes the degree of movement felt. If there is an infiltration of one of the apices this side will expand less freely. Increase in tactile fremitus is due to infiltration so as an aid to early diagnosis is of little importance. However, even in very slight trouble the muscles over affected area are found to be rigid, and this can be elicited by light palpation.

Percussion is of more value to some than others. Those who have a musical ear and are able to interpret the finer shades of pitch and quality get most out of percussion. The sounds elicited from percussion of the same patient, by several physicians cause more difference of opinion than either inspection, palpation, or auscultation. It is well to remember that normally the right apex note slightly higher in pitch than on the left. The note over the apices is less intense than over the bases, for this reason, it is better in percussing to begin over the bases and percuss upward. Percussion is important in examining children for it is the most important physical sign found in paravertabral or parasternal tuberculosis.

We all rely more on auscultation than any other procedure in physical examination. It is essential to keep in mind the normal variations which exist between the two apices. Expiration at right apex is frequently prolonged and tubular in quality. Normally vocal resonance is also exaggerated over right apex. Different methods are used to bring out rales; some are heard on ordinary inspiration, some on deep breathing, others only after forced expiration is followed by cough and deep inspiration.

In early tuberculosis rales are rarely heard with ordinary or even deep breathing, but after cough and deep inspiration rales may be elicited. Coarse rales that are heard with ordinary quiet breathing are usually indicative of rather extensive infiltration.

Persistant rales in upper portions of lungs if not due to bronchitis or influenza are usually always evidence of active pulmonary tuberculosis. In cases where rales are only in base of lungs we are not justified in making a diagnosis of tuberculosis, without other evidence. Rales in base may be

due to chronic bronchial pneumonia, pleurisy, or non-specific spirochaete infection.

The most important single thing in the fight against tuberculosis is finding the cases, all the cases, for this we rely wholly on the physician.

The next most important thing is giving those found to have tuberculosis proper treatment and again we rely on the physician, and third prevent the patient who has tuberculosis from infecting others and here again the physician plays a very important part.

WOMEN AND WOMEN'S ORGANIZATIONS IN THE TUBERCULOSIS CONTROL PROGRAM

By MRS. CHAS. R. WHITAKER

Chairman Health, N. C. Federation of Women's Clubs and Vice-President N. C. Tuberculosis Association, Southern Pines, N. C.

There is in every true woman's heart a spark of heavenly fire. God placed it there, and ordained that she should be the helpmate of man, through all the changing vicissitudes of life. We believe for the most part, woman has lived up to this biblical injunction.

We can assure every one present that the women of North Carolina in every county, city, hamlet and community, are willing to be helpmates to men, doctors, health officers, nurses, the official and non-official agencies in the great fight against Tuberculosis and for health in North Carolina and the United States.

It is truly amazing the manner in which an army of women in North Carolina seemingly arises over night every year to enlist in the war against Tuberculosis as represented in the Christmas Seal Sale. Practically all these women are volunteers, each soon learns her place, and penny by penny and dime by dime the money

required for the fight against the great white plague is raised. Not only are we ready now, but, many of us have been acting as pioneer women—have stood behind the workers and loaded their guns—for quite many years.

The Women's Clubs have given willingly of their time and means in aiding in our Seal Sales and have been very successful. In some places as a County Tuberculosis Association—sometimes as direct representatives of the North Carolina Tuberculosis Association.

Usually this work is done through the health department of the club, and when the latter is the case, the clubs have followed through and showed a very wise expenditure of the 75% of the Seal Sale money left in their hands. One club by co-operating with the North Carolina Tuberculosis Association established public health nursing in North Carolina. Another established and maintained a

little santatorium which grew, flourished and bloomed into the first real County Sanatorium in our state. Other clubs used their percent in demonstrating the value of health education; many others have used their money for children's tuberculosis clinics in their schools. Others have furnished milk and hot lunches for the infected and undernourished children, while others have provided Sanatorium treatment. One has established a Children's Camp.

A president of a club being cerely interested in the Tuberculosis Association work, organized a county health association. which has functioned for seven years and been instrumental in building up a health unit consisting of a whole time county health officer, clerk, sanitary inspector, nurses, etc., with subunits of women in every community in the county who look after their community's welfare, sell Tuberculosis Christmas Seals to raise their portion of the money to aid in providing milk and nourishing food for the tuberculous patients lunches and milk for the undernourished school children.

The Parent Teachers Association is a well organized group, accomplishing magnificent work in the schools in furnishing hot lunches and milk; and through the wise advice and guidance of the North Carolina Tuberculosis Association, many, in fact nearly all, have abandoned the sale of candy, coca cola, etc., and confined their offerings for sale to milk and wholesome nourishing food for the growing child, and in nearly every school the lunch room furnishes milk and other food, without charge, to children who are unable to pay. To the Home Economic Teacher and the Home Demonstration Agent we offer our sincere appreciation for making the latter possible in many places.

We note most interesting health programs are being evolved by the Auxiliaries of the County and State Medical Societies and the Auxiliaries to the American Legion, which show the wide range of health work done by the women of North Carolina in the many organizations with which they are connected.

These are only a few examples of what has been accomplished by the North Carolina Tuberculosis Association through the women of the state, and an earnest of what the women in every community and county in North Carolina stand ready to do if you will only lead the way, and you can count on them 100% in the County Tuberculosis Control program being discussed in the symposium at this time.

CHARLOTTE CITY-COUNTY TUBERCULOSIS CLINIC

By
JOHN DONNELLY, M. D.
Superintendent Mecklenburg County Sanatorium

This Clinic is one of the oldest, if not the oldest Tuberculosis Clinic in the state. It was first organized in connection with the North Carolina Medical College Dispensary in the early fall of 1911 by Dr. W. R. Engel, who died in 1912, and myself. It was conducted in connection with the college, until about the middle of the

year 1916, when the college was discontinued.

In a very short time after its opening, the volume of work in this clinic demonstrated the necessity for a Sanatorium for the care and treatment of tubercular cases. There, with the assistance of a few always loyal workers outside the college (one of

whom was Mrs. Finger, the president of this organization) originated the idea for the erection of such an institution as we now have in the Mecklenburg Sanatorium. However, this result was achieved only after about fifteen years work.

As I have said, the clinic was discontinued for a time after the closing of the North Carolina Medical College, but it was renewed in connection with the Charlotte Health Department in 1919 under the regime of Dr. C. C. Hudson, Health Officer. The Clinic has been in continuous operation since that date, over ten years. For practically this whole period, it has been conducted during two afternoons of each week.

The following figures will illustrate the amount of work that has been done. These figures cover the something over ten-year period from the year 1919 to date:—

year 1919 to date:—				
Examinations of new patients				
for suspected tuberculosis	4,645			
Lowest No. was in 1920	208			
Highest No. was in 1927	615			
Total visits (old and new pa-				
tients combined)	10,230			
Lowest number of visits was				
in 1924	538			
Highest number of visits was				
in 1921	1,228			
and in 1929	1,210			
Nurses' visits to the homes of				

clinic cases during the period 34,542

(an average of 3,454 per year)

Since the opening of the Mecklenbury Sanatorium the Tuberculosis Clinic has been conducted, actually, as an out-patient department of the Sanatorium. Patients seeking admission to the institution are examined there, and the follow-up of discharged patients is conducted through the clinic. These patients, on discharge, are requested to report once each month, if possible, to the clinic for observation. In addition to this the nurses make visits to the homes when necessary.

The Sanatorium was opened for the admission of patients on September 7, 1926. Since that time to date, we have treated in the institution 680 cases, divided as follows: .

White _	4	00
Colored	2	05
Children	************	75

Of this number there were admitted through the Tuberculosis Clinic:

White	 211
Colored	 120
Children	 71

402

680

In addition to this number, I have received in this clinic 158 applications for admission from prospective patients who either died before they could be admitted, decided to go to other Sanatoria, for various reasons decided not to enter the Sanatorium at all, or could not be located after filing the application.

MORTALITY AND MORBIDITY OF CHILDREN OF SCHOOL AGE

The number of deaths of children of school age would be "shocking" if we were not so accustomed to their daily and hourly occurrence. There is such a death every 10 minutes.

The latest statistics are those for 1925. These are for the "registration area" which at that time had an estimated population of 103,109,000 persons of all ages (about 90 per cent of the total population) of whom 9,057,-000 (or about 9 per cent) were colored. Statistics by groups are given for children 5 to 9 years and 10 to 14 which represent fairly well the ages of the school population. While comparatively few children are in school during their fifth year and the death rate is a trifle higher than for those who have reached six years the figures can be considered approximately those for children 6 to 15 years of age. In the 5 to 9 years group there were about 11,027,664 children and in the 10 to 14 group 10,222,908. The deaths in the former group in 1925 were 22,513 (white, 19,488; colored, 3,025) and in the latter 18,448 (white, 15,218; colored, 3,230). The total deaths from 5 to 14 years of age

was 40,961. Roughly one in every 500 children at these ages died in an average recent year in the registration area. As the registration area represented about 90 per cent of the total population the estimated deaths at 5 to 14 years of age for the country at large would therefore be about 45,000. Many children attend school after their fifteenth year and the total enrollment for this year at school ages as determined by the Bureau of Education was 24,650,292 so that the total number of deaths in children of school age was probably around 50,000 or about 135 for each day of the year. The deaths among colored children were relatively much higher than those for white children, being approximately 3 per 1,000; thus lowering the rate for white children to about 1.95 per 1,000 at ages 5 to 9 and to about 1.65 per 1,000 at ages 10 to 14. (There are proportionately fewer colored children at the latter ages.)

Dublin and Lotka, in 1927, estimated (on the basis of attaining an earning capacity of about \$2,500 per year) the money value of a human life at

5 years as \$14,156 and at 15 years \$25,341. Taking a general average valuation of each child of school age at \$20,000, we have (for those who desire to consider human life in dollars and cents) an annual monetary loss from deaths at school age of about \$1,000,000,000. The loss in expense for schooling at \$100 a year, if

all who died had been in school five years, would be, in addition, \$22,500,000 or at any rate sufficient to remove the "about" from the billion dollar estimate. One-tenth of this sum would suffice to furnish one physician at \$4,000 and one nurse at \$2,000 for every 1,500 children enrolled in our schools.

ARE WE EDUCATED?

In its issue of October 6, 1928 the Christian Herald published an article under the above title by Dr. Herman Harrell Horne, a professor in New York University. This article is a most comprehensive discussion of the subject of education. Of especial interest to our North Carolina readers is the fact that Dr. Horne is a native of North Carolina, and is a man who has made a distinguished record as a professor in the School of Education of New York University.

It would be well worth while for any of our readers to procure a full copy of Dr. Horne's paper. He states in his article that "education is adjustment." He says further that "the ideally educated person, who, of course, does not exist, has, we think, the following characteristics." Then Dr. Horne proceeds to enumerate on a percentage basis thirty-three especial characteristics which an ideally educated person would be found possessing. He rates each point at a fraction of over 3, making a total of 100 points, if it were possible to reach, for the fully educated person.

We quote here, as especially fitting, the first four items, which he enumerates, exactly as he has written them down in his article. It is more than significant that the very first item begins with the physical fitness of the individual. We have not the space to publish the article in full, but as these first four items should be of especial interest to all our readers we herewith set them forth:

"1. He is physically fit. He is not

usually below par. He pays the necesary price for physical fitness in regularity of habits, no health-destroying habits, proper diet, outdoor exercise, adequate sleep, enough work, but not too much, and the absence of worry. I do not say, 'Never overwork,' but this; 'If you do overwork, make the period short, and allow time to recuperate.' While the nervous system is young and growing, better omit the cigarette. Read Elbert Hubbard on 'The Cigarettist,' a valuable brochure more pertinent by half to the American scene now than when written years ago. The memory of Roosevelt is an inspiration for all the weak who would be strong. Physical fitness is itself a form of adjustment and is a condition of efficiency in the other adjustments to come.

"2. He lives near the maxium of his efficiency....His physical fitness allows him to do so. He is not doing just enough to get along in the world. He is doing, without strain, all he can do. Most of us do not utilize more than half the energies we have available. Nor do we expend that half to greatest advantage. Efficiency is a fraction whose numerator is production and whose denominator is expenditure. You become more efficient by either increasing production or diminishing expenditure or both. That human machine is most efficient which accomplishes most with least damage to itself.

"3. He has a body which is the ready servant of his will. This means

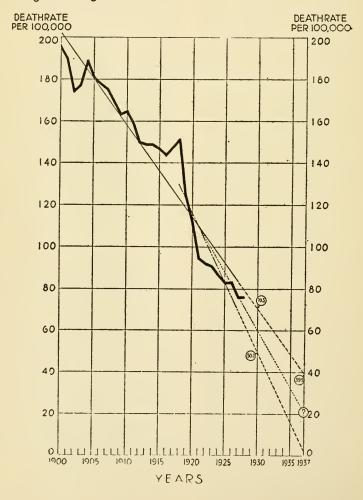
mind and body are adjusted. The phrase is Huxley's We must master our bodies or they will master us. The weakest body is the greatest tyrant. The head of man is carried by the body, but should be able to

command whither. The body was made to serve, and it will serve well, if well served. Every man should know his own machine, respect its limitations, and utilize its power.

"4. He is capable of earning a

TUBERCULOSIS - ALL FORMS Prospective deathrates, 1929 to 1937

Original Registration States and District of Columbia



living for himself. This is economic adjustment. He is not dependent upon the earnings of another. This refers, of course, to adults, not to the sick or children in school. This is economic independence, equally desir-

able for women and men. The married woman who is making a home is more than supporting herself, she is actually increasing the family income by her service. Be able to earn your own living, and do so for self-respect, even if above financial worries."

UNIVERSITY OF NORTH CAROLINA OFFERS HOME STUDY COURSES

We take pleasure in calling the attention of our readers to the excellent correspondence courses now offered by the University of North Carolina. It is now possible to study any of one hundred and fifty different University courses by correspondence. Practically all of these courses lead to a degree or to the advancement of teacher certification credit.

Correspondence instruction is no longer an experiment. Numbers individuals have been benefited in the past by utilizing these courses offered by the University. A statement issued from the University recently explains that there were sixteen hundren and ninety-five individual registered for university correspondence work last year. Some of these people registered for more than one course. The enrollment last year showed an increase over that of previous years. It is a matter of satisfaction to record that there was a high percentage of completion of all the courses after they were begun.

A distinct advantage of correspondence instruction is that it is especially adaptable to adult education. The Extension Division makes satisfactory arrangements to meet the requirements of adult students who for various reasons, desire to continue study after securing academic or professional credit.

Correspondence instruction offers many unusual advantages, especially to students who are engaged in full time positions, or teachers who wish additional professional training. It is probable that many of the readers of the Bulletin would find one or more of these courses helpful, as the fees are low enough to be within reach of almost any individual. It might offer helpful recreation and diversion to such people as desire it. A letter addressed to Dr. R. M. Grumman of the University Extension Division, Chapel Hill, North Carolina, would bring full instructions about the courses offered to anyone desiring it.

TREAT THE CHILD, NOT THE POSTURE

"Treat the child, not the posture, in cases of 'poor posture,' which should be regarded as a sign that the child needs a careful and complete medical examination. Find the cause of the grotesque attitudes, which must have good reasons. When a child is 'nervous,' examine the parents first, for very often the child's health and behavior are referable to them rather than to itself. When a child 'won't eat for a meal or two,' let him alone and don't force him to eat between meals. Water is sufficient. Give him an opportunity to eat at each regular meal and give him only a very small amount of food at a time. When he begins to eat and wants more food, give it to him, but put only a little bit on his plate at a time, until his appetite is fully recovered. This will cure many of the cases of 'lost appetite' seen." Thus saith Dr. Wilkes, Director of the Division of Medical Service, American Child Health Association.

SUICIDES

For the last two or three months more cases of suicide have been reported to the State Board of Health for each month than were reported during any whole year's period as recent as fifteen years ago.

Every individual who is concerned about the health and well being of our people cannot but fail to experience an uneasy feeling on account of the menacing increase of suicide reported all about. In many foreign countries, especially European countries, and among many tribes of savages the suicide rate has always been high, but in free, liberty-loving America this is a new and painful experience. In the more highly civilized European countries the practice has been common among such classes of the population as army officers, politicians, and the professions generally. In North Carolina the increase in such tragedies is a matter which calls for faithful consideration. We all know that the pressure of making a living today and keeping the pace set by our neighbors is more tense than ever before. Even the distressing period of the War between the States, followed by the terrible years of reconstruction, was not accompanied by so many tragedies as we have experienced during the past few years.

The opinion of one student is about as good as another as to why this increase in suicides prevails to such a great extent at present. It may be that the increasingly high standards of the schools, the lengthening of the term, the long school hours, are laying the ground work for nervous troubles later on. Depression in business, the loss of jobs, low prices for produce, may play a part. The freedom and ease of transportation, the increasing amount of money necessary to keep up the standards we have laid down as desirable for our

people, may be one cause. It can hardly be pleaded, as was once the case, that the monotony of life has much to do with it, although undoubtedly suicides among women who have large families of children, as in the past, include a large number of these suicides. No one knows the terrible drudgery day in and day out that is necessary for a woman to go through with in rearing a family of children, especially if she is the wife of farmer or a day laborer. The hardship and monotony of such a life can only be appreciated by those who have experienced it.

There can be no doubt that many cases of suicide occur because of the lack of grit and stamina to face adversities in fortune, and to work gradually out by a slow and painful process of industry and stick-to-itiveness, when surrounded and almost overwhelmed by business or domestic entanglements. There are also a large number of suicides, probably the largest of any single class, on account of mental derangement. This is often incident to ill health and many other causes. The strain and stress of the times in which we are living tend, of course, to increase the number of such casualties, we might call them.

If there is any one thing that people need above anything at this time, it is an effort to more correctly evaluate the real things of life which



Beautiful Catherine Lake in Onslow.

are of enduring worth, and to return to a more quiet and philosophical manner of living. The philosophy of this writer has always been similar to that attributed to Owen D. Young sometime ago, and that is to expect but little from life and to be content when only a little is forthcoming. Disappointment can never follow such a philosophy.

ORAL HYGIENE

Every parent in Tarboro and this township should have heard the able and educational address last night by Dr. Branch of the State Department of Health at the Monday evening session of the Parent-Teachers Association. Dr. Branch is a dentist and he knows whereof he speaks. In his talk he stressed the great importance of the care of the teeth of children in our public schools. Not only did he tell of the many children who were suffering from the effects of bad teeth and diseased gums, but he told how these troubles could be remedied and after all his remedy was a most simple one that could be taken advantage of by all parents with a small cost.

One thing that struck us was that in many cases the child was sick and no one seemed to know the reason. He spoke of one child, a girl, who had been in the first grade for four years, at a great cost to the taxpayers of the county where she lived. An examination of the teeth and mouth disclosed that she had been intoxicated by pus flowing from her gums into her stomach, causing a sluggishness in mind and body. But he did not stop her, for, said he, after this girl had received treatment she went ahead with her studies and was thereafter one of the brightest pupils in her class.

Dr. Branch did not deal as much in theory as he did in actual facts and figures and this he did with slides, showing the actual conditions found in many cases. He called upon people of the county to continue these

dental clinics from year to year, stating that if the county people would raise the sum of \$900 the state would furnish each year a term of another four weeks free of charge to the taxpayers.—Tarboro Southerner.

"HEAVY TRUCKS PROHIBITED"

If they would only reduce the strain to something below the ability to bear, they could continue to live happy and serviceable lives. But if they won't, they don't, and that's the end of them. And one more figure is added to the columns of preventable deaths from heart disease, tuberculosis and many other diseases.

IMPORTANT TO PREVENT TUBERCULOSIS NOW

Economic conditions generally speaking are fair barometers of tuberculosis. Just after the World War ended, the mortality from tuberculosis in the war impoverished nations of Europe was much higher. At the same time in the United States the mortality continued to decline. Unfavorable health conditions manifested in an increase in such diseases as tuberculosis nearly always follow "panics" and "depressions" in the business world. Insufficient food, irregular living habits, unemployment, and worry all tend to favorable conditions for the contraction of tuberculosis. The soundest investment people can make in "hard times" is in efforts to prevent the spread of disease.

DEATHS FROM PULMONARY TUBERCULOSIS BY COUNTY AND RACE: 1929

TOTAL DEATHS (Tuberculosis all forms) 2,553

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Published by THE NORTH CAROLINA STATE BOARD SHEALTH

This Bulletin will be sent free to any citizen of the State upon request. Entered as second-class matter at postoffice at Raleigh, N. C., under Act of July 16, 1894. Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

VOL. XLV.

DECEMBER, 1930

NO. 12

HELPING THE UNDERNOURISHED



Our front cover this month is supplied by the Durham Health Department. The picture represents one of the children who were so greatly benefitted by a six weeks sojourn last summer in a camp on Eno river for Durham county school children physically below normal.

This year instead of wasting money on the usual Christmas trifles it would be fine if real service could be planned for those who cannot help themselves.

How about a Spring eamp for pellagra sufferers in every county needing it, to be followed by a Summer program for the children?

Plans should be made now.

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly The Health Bulletin, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils Cancer Constipation Colds Clean-up Placards Chickenpox Diphtheria Don't Spit Placards Flies Fly Placards

German Measles Hookworm Disease Infantile Paralysis Influenza Malaria Measles Pellagra Public Health Laws Prenatal Care Sanitary Privies Scarlet Fever

Smallpox Teeth Tuberculosis Tuberculosis Placards Typhoid Fever Typhoid Placards Venereal Diseases Water Supplies Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, N. C .:

Prenatal Care (by Mrs. Max West) "Our Babies" Prenatal Letters (series of nine monthly letters)
Minimum Standards of Prenatal Care What Builds Babies? Breast Feeding Sunlight for Bables Hints to North Carolina Mothers Who Want Better Bables Table of Heights and Weights

The Runabouts in the House of Health (pamphlet for children from 2 to 6

years of age).
Baby's daily Time Cards: Under 5 months; 5 to 6 months; 7, 8, and 9 months; 10, 11, and 12 months; 1 year to 19 months; 19 months to 2 years.

Diet Lists: 9 to 12 months; 12 to 15 months; 15 to 24 months; 2 to 3 years; 3 to 6 years.

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CHRISTMAS GIFTS FOR BETTY

By SUDIE E. PYATT

Betty's feet were sore, her back ached, and her temper was short during the closing hours of the heavy Christmas Eve sales at Dunningham's Department store. If the slender highheeled, narrow-toed brown pumps, size four, did not look so pretty on her feet, she would discard them and wear a pair of low-heeled, flattoed oxfords, the sort that stout, plain Mary Lou, of the hosiery wore, but the brown suede pumps did look so pretty and fashionable on her feet, even aristocratic, Betty told herself, as she regarded her aching feet encased high-heeled narrow-toed, in the pumps.

How a girl's feet looked were important, especially when one had a sweetheart like young Dr. Rhodes McLean, and a girl's feet did not have the nifty, stylish appearance, in flat, square toed shoes, that they had in slender high-heeled pumps, at least Betty did not think so, and in thinking this Betty was like ninety out of every one hundred women, young, middle-aged, and even old.

"What's the price of those boxed gloves?" a customer asked, interrupting Betty's mental soliloquy on feet and shoes.

With an eye to the clock, Dunningham's closed at seven o'clock, for it was no cheap department store that remained open until nine or ten o'clock, even on Christmas Eve, with her sore feet and her aching back, Betty forgot her long months of careful training in salesmanship, and answered a customer sharply. "Don't you see the price is plainly marked on the box, \$2.98?"

The customer looked at Betty with a malignant eye, and without saying a word, elbowed her way through the crowd in front of the counter to a floorwalker.

Betty watched the woman fearfully, two years at Dunningham's for her, and never before had a customer made a complaint against her.

For the next person who came to the glove counter Betty made herself forget her feet, and her back and control her short temper, and gave her the best of service. It was only her long record for courtesy, and her treatment of the next customer, which the floorwalker watched, that saved Betty's job at Dunningham's that Christmas Eve.

Betty wanted to run through the side entrance the employees used to meet her sweetheart, when the big store had finally closed for the holidays, promptly at 7 o'clock, but her feet hurt too badly to do that, but she did manage to walk a bit faster, consoling herself that the view the young doctor would receive of his sweetheart's feet and ankles through the lower portion of the glass door at the side entrance, would be one of the most

lovely views of feet and ankles that passed through the door.

"O, Rhodes, I am so tired!" was Betty's greeting to her waiting sweetheart.

"Sorry, girlie, I knew this would be a hard day for you, Christmas Eve, and those slippers you have on made matters worse. Betty, darling, far be it from me to dictate what you shall and shall not wear, but I do want you to wear sensible shoes to work in, if you can not wear them for dress and social occasions."

Betty looked at the doctor, a tear trembling suspiciously in her soft brown eyes. She had been consoling herself that her feet would look pretty for her sweetheart in the brown pumps, and here he was actually scolding her on Christmas Eve, for wearing them.

"It's not my shoes, it's the hard day's work that makes me tired," Betty said crossly, "and if you are going to lecture me on the wearing of shoes on Christmas Eve, I am going to leave you and go home to bed."

"All right, young woman, that is exactly what you need, but first we're going to stop at a shop along the street here, and I'm going to buy you a Christmas gift."

There was surprise in the look that Betty gave the young doctor. Of course, she had known he was going to give her a Christmas present, but she had been expecting something very different from what one could select in a few minutes in the casual way, he was going to make the purchase.

"Do you know, Betty that there are twenty-six bones in each of your feet, connected with four times that many ligaments, and I can not tell you how many muscles and nerves?" the doctor queried his sweetheart on her knowledge of anatomy, and went on, not waiting for her to answer. "There are four arches in the feet bound together with their ligaments, muscles and nerves, all made especially to

support the body, and at the same time to act as an engine of motivation for it. You say it is your hard day's work that is causing you to feel so badly now. I grant that is one of the reasons, but the chief reason is that you started the day wrong by putting your feet into those high-heeled, tight slippers, not giving your feet a fair chance to help you carry the strain and worry of the day, rather you did everything you could to make it difficult for your feet."

"Rhodes McLean, if you do not stop lecturing me on feet on Christmas Eve, I am going to leave you even if you are going to buy me a Christmas gift!" Betty cried.

"The wearing of badly designed and ill fitting shoes, is the cause of nearly all foot troubles, including that most common of all foot ailments, fallen arches, flatfoot or weakfoot, as some people call it," Dr. McLean continued, ignoring his sweetheart's threat. "Flatfoot is caused by the flattening of the long arch, which extends from the heel to the great toe. In flatfooted persons the impression of the foot is practically the same from the heel to the toes. This is not true in a normal foot. The impression of the normal foot will be narrower in the center than at the heel and toe.

"Lots of women have trouble with the arch that extends across the ball of the foot from the little toe to the opposite side. This difficulty is usually caused by wearing the kind of shoes you have on this moment."

Betty's lips trembled with something that was like a badly twisted smile of scorn, "You have told me enough times tonight, that you do not like my shoes, thank you."

"No, I do not, Betty," frankly confessed the doctor. "The proper way to carry the weight of the body on the feet is in a straight line through the center of the feet, with all five toes pointed straight ahead to give a final forward push at every step. The

shoes you are wearing, throw your entire weight onto the balls of your feet, and your toes. Improper use of the feet in walking and standing causes most foot troubles. If you are going to wear shoes that you can not possibly stand and walk correctly in, how do you expect to have healthy, comfortable feet?"

The heels of Betty's brown suede pumps pounded indignantly on the sidewalk paving, jarring every organ in her slender body. She was getting more cross with the doctor every moment. He would not listen to what she said, perhaps he would heed the angry pounding of her heels. He did, but not in the way Betty expected him to.

"No, no, Betty, do not walk that way. One should never jar the body in walking, or pound the heels. You are 'toeing out,' too, and that is not the proper way to walk. Point your feet straight to the front, four or five inches apart, the weight of your body supported on the outside of your feet. In sitting, still point the feet to the front."

"If you keep on walking as you are," the doctor suggested mildly as Betty continued to pound the sidewalk with her high suede covered heels, "you will wear those pretty, little, slim heels out on the sides in such a way they will never look well again, and the inner side of the sole will wear, so you will have to buy a new pair the first thing you know. That is what happens to shoes when the person wearing them 'toes out,' or is flatfcoted."

"O, so I have flat feet, and I 'toe out' when I walk. Too bad you didn't discover all of these defects before." Betty was getting more angry every moment.

"Not yet, Betty, but you may have if you persist in wearing the wrong kind of shoes. Here's a little shop where I know they keep good sensible shoes for women, and the owner has made a special study of foot troubles, and the proper way to correct them. I buy all of my shoes here. I want you to come in and have a pair of comfortable shoes fitted for your Christmas present from me."

"Shoes for my Christmas present?"
Betty gasped. "I am not a pauper quite yet, Dr. McLean, thank you. If shoes are all you can give me for Christmas, I'll be going on. I am very well pleased with my brown suede pumps. Dick Pelton likes them if you do not. He told me so today."

Dr. McLean's eyes were puzzled as he looked at this cross Betty. "Darling, I am not making any reflections on your financial standing. In buying you another pair of shoes I merely want you to have your pretty, little feet properly fitted for one time, so you can see how differently your feet will feel shod in a pair of the right kind of shoes."

Betty walked past the doctor into the shoe shop. "If you insist," she said, with the air of a movie queen.

The brown suede slippers removed from Betty's tired feet by the shoe shop manager, who came forward to greet Dr. McLean as an old friend, the shoe shop manager told Betty to stand with her heels together, and bring her great toes together. Wonderingly Betty complied.

"See, as I thought, Simpkins," the doctor said to the shoe shop manager, "can not do that simple, little stunt. Shows her shoes have not been what they should be. If one wears the proper shoes all of the time it is easy to bring the feet together along their entire length, from the heels to the great toes."

Simpkins fitted Betty's feet with a pair of low-heeled, broad-toed, brown alligator leather oxfords, while Dr. McLean approved both the style and the fit. "See," he said, stooping to feel Betty's foot in the oxford, "it is long enough, wide enough across the toes, and fits snugly around the heel and over the instep. These are all important in buying shoes."

The shoe shop manager had fitted both of the brown alligator leather oxfords to Betty's feet. She wondered why, for she never tried on but one of a pair of new shoes she intended to buy.

"Stand up, Miss Reed, and throw your full weight on one foot at the time," the shoe shop manager said, and Betty still wondering, did as she was told. She had never tried this, either in buying shoes.

"You see," Simpkins explained his reasons for the tests, "It is always wisest to try on both shoes of a pair when you go to buy a new pair of shoes, and always try that little stunt of standing with the full weight of the body on each separate shoe. The shoe may feel all right with weight distributed evenly both shoes, but put it all on one, and the feeling may be very different. just as bad to have a shoe too big as it is to have one too small, and also important to see that your stockings as well as your shoes are of the proper size."

"Do those feel comfortable in every way, Betty?" the doctor asked.

"They certainly do," Betty replied, for a moment forgetting that she was cross, very cross at Dr. McLean for giving her shoes on Christmas Eve instead of the diamond engagement ring she had felt for months that he would present her with at Christmas time.

"Wrap these, Simpkins," the doctor said, handing Betty's brown suede pumps to the shoe shop manager, just as a woman with two children came into the shoe shop. The woman wanted to buy shoes for the children for Christmas.

"Babies' feet are nearly always perfect," Dr. McLean observed to the shoe shop manager.

"Yes, and they stay perfect until their parents spoil them by buying the wrong kind of shoes for them," Simpkins replied. "I wish every mother and father would teach their children to walk softly, let them walk street curbs, follow a narrow board on the floor, or do anything that will teach children to walk lightly with their feet straight ahead, the body properly balanced on the feet."

"Yes, and be sure you sell those youngsters who have just come in broad toed, flexible shoes, and tell their mother to see that their stockings are not too large, but large enough," the doctor cautioned the shoe shop manager, as he placed his hand on Betty's arm, and they left the store.

On the way to Betty's home neither Betty nor the doctor said very much. Already Betty felt much better, the sore feet, aching back, and the short temper that had all been hers only a short time before were rapidly improving. Looking at the doctor walking earnestly along, close beside her, holding her arm tightly against his body, Betty felt almost, but not quite as if she could forgive him for not giving her the ring.

Wait until she got him into the warm, bright living room at her mother's home, and she would tell him this would be their last Christmas, and that she did not care to go through life with a man who put such prosaic things as low-heeled, broad-toed shoes against the romantic flitter and beauty of white gold, chased, diamond set engagement rings.

The warmth of the little living room, after the crisp cold of the street, greeted them both pleasantly as they came in. Somewhere in the rear Betty's mother was doing Christmas cooking, and the delicious smell of the cooking food, the holiday greens, decorations, and the brightly burning wood fire in the living room wrapped Betty and the doctor about with a delightful Christmaslike atmosphere.

Betty slipped off her coat, and put down the bundles she carried in her arms, while the doctor divested himself of his overcoat and scarf.

They stood before the fire, holding

out their hands, chilled from the air of the street, gratefully to the blaze. Then quite simply Dr. McLean took a small, a very small package,, from his pocket, and Betty cried, "O you darling!" while Dr. Rhodes McLean fitted just the kind of ring Betty had made up her mind months ago that he was going to give her for Christmas, on the fourth finger of her left hand, Betty's second gift that Christmas Eve.

"Now, little girl, do I get a kiss, and am I forgiven for buying the shoes?"

"You certainly will," Betty laughed happily as she kissed the doctor not once but many times, as he held her close in his arms.

"But, Rhodes," Betty suddenly drew back in the doctor's arms, "how can you, a doctor, marry a girl who is threatened with flat feet, as you said I was tonight?" "Honey, I would marry you if you were flat footed, pigeon toed, knock kneed and bow legged," the doctor answered Betty's query earnestly," and then I would have you fitted with the proper shoes to correct the defects as nearly as possible."

"Can't I ever wear a pair of highheeled shoes again?"

"Possibly for dress occasions, if you make sure the heels are not too high, and they are not too short and narrow," the doctor answered easily.

"You dear," Betty gave the doctor another kiss, but whether it was for Christmas, his gifts to her, or his promise, Betty did not know, but looking at her neatly shod feet in the alligator brown leather oxfords she said, "I am not going to mind not wearing high-heeled shoes. I had no idea what stunning looking shoes one could find without high heels, if one really looked for them."

HARD YEARS FOR OLD PEOPLE

Ву

NELLE SWARTZ Member, New York State Industrial Board

Do you know that two out of every five persons reaching the age of sixty-five in this country find themselves dependent? Do you know that there are today almost two million old folks in the United States who have no means of their own and must depend upon others for their support? Can you think of anything more pitiful or tragic than old age when it is surrounded by poverty, indifference and loneliness?

The population of our poorhouses is on the increase; the last pauper census shows an increase for men and women over sixty-five years of age of 10 per cent over the preceding census, and there can be no doubt but that the next few years will show a greater increase. This will be due to

the fact that not only has the span of life of man been lengthened because of much better health conditions, but the working years, the productive years, the income-producing years have been shortened. In other words, the span between the stoppage of work and death increases every year.

Industry is developing in this country in such a way that it is being done in an increasing measure by the younger group. Machines are replacing men; the process that once required the skill of trained and seasoned workers can now be done by a sixteen-year-old girl pushing the button of a machine. A clothing factory illustrates his point, where three hundred expert cutters had been employed at the cutting of men's clothing. A ma-

chine was invented and built which could cut more clothing in a given period and do away with the services of the three hundred cutters. What happens to them? Men skilled at one trade men grown old in their craft? It is more difficult than ever, now, them to take up something new, because only young men are being engaged. This story can be duplicated hundreds of times. Behind each story there is the repeated tale of an honest and industrious life. They try for jobs as watchmen, elevator men, janitors, peddlers. All overcrowded jobs, all at the lowest rung of the wage ladder. They slip and fight again to retain their independence.

Fewer workers are needed since machine power can produce in much larger quantities than man power. This point can be illustrated by one instance after another. The paperbox industry, for example, that industry which provides boxes for our shoes, our hats, our candy, and the manifold things which come neatly packed in a paper box. The increase in the value of its product over a tenyear period was 51 per cent, while the number of wage earners in this same period decreased 32 per cent.

A textile mill which produced 137,000 yards of cloth with a pay-roll of 5,100 workers, introduced modern machinery and produced the same yardage with 2,000 fewer men.

Thousands of musicians are being displaced as a result of the introduction of the "Talkie."

Instances could be multiplied. Some of these workers, of course, are being absorbed by other industries in which employment has grown at a rapid rate. If this had not been true, this country would be in the midst of critical and continuous unemployment. The extensive sales and use of automobiles has given employment to thousands of salesmen and garage employees. New hotels have added thousands to their staff, beauty parlors have absorbed another large

group; the wider use of the telephone has meant an increase in the number on the pay-rolls of telephone companies. Until ten years ago, industrial expansion seemed to take care of these men replaced by machines; but during the last few years the supply of new jobs has not kept pace with the workers displaced, plus the young workers coming on each year, and so somewhere a line has to be drawn—some group has to be permanently laid aside and industry has begun to establish an age line. With some industries, compulsory retirement is fixed at sixty years, some at fifty, and the dead line at forty is being discussed. Many leaders in industry have devised pension plans which, at a certain age, the worker is retired on a pension proportionate to his earnings. Others continue to carry old and disabled employees on their pay-rolls. However, only the successful industries are financially able to carry the burden of extensive insurance or pension systems. last Census of Manufacturers shows that there are 290,105 establishments in this country, of which 261,263 employ less than fifty persons, or 90 per cent of the total number. Obviously the vast number of industrial plants are small, and in them pension systems are often impracticable.

The shortening of the work life of our industrial workers means that incomes stop at an earlier age; it means the prospect of saving for old age becomes less and less, for there are fewer years in which to save. Assuming that the father of a family works regularly, which is most unlikely, from eighteen to sixty years of age, a period of forty-two years; assume that his yearly income over that period is \$1,500, which is high, and further assume that he is married and has three children, and that there are no doctors' bills or emergencies, what can he save to carry himself and wife after his productive years are over?

This is answered by a study of the

cost of living in the United States, where families with a yearly income of \$1200 and under \$1500, had, after the bare necessities of life had been procured, a yearly surplus averaging \$48 per family. If this entire amount had been saved for old age, it would amount to only \$2,016.

It is often argued that the children should assume the financial burden of their dependent parents. Thousands do, of course, but there is an old and true adage which says: "It is much easier for a mother to care for six children than for six children to care for a mother." Furthermore, many who are compelled to live in the household of one of their children find it both humiliating and unpleasant. especially when their children's children are needing shoes, when for every five cents which the parent might want he must needs ask for it.

Just a pittance of one's own, for one placed in such a position, adds tremendously to one's self-respect; just enough to be free to give a bit of chocolate here, ten cents to church, to buy an evening paper, or to take a bus ride.

Everything attacks the old people at once; low pay, irregularity and unemployment, illness. Whatever savings there were are soon eaten up.

And so, on goes the story as larger and larger the numbers grow. Destitute old men who for all the years of their productive life have contributed to the economic life of the country, heroic old women well past their three-score and ten, going out to do

an occasional day's work—on goes the tale of years of hard work and of saving, coupled with illness and unemployment, which turns these people from self-respecting, thrifty citizens into a class not only financially dependent but hopeless and forlorn at an age when they are least able to bear it; at a time when their lives should be crowned with peace and satisfaction.

Economically this country has developed rapidly; mechanical invention has taken rapid strides; mighty machines are taking the place of human eyes, ears and hands. It would not be possible to return to the old days of hand labor with its resultant decreased production. Socially, has it kept pace? It was only after millions of children had been exploited in factories that the first child-labor laws were passed; it was only after people were allowed to live in crowded, unsanitary, ill-ventilated tenements that fresh air had to be rediscovered, and now when it has been known for years that machines were rapidly replacing men, that the dead line for employment each year is fixed at a younger age, we find ourselves with the problem of adequately planning for the care of those who are too old to be of use in our modern industrial civilization, and who through no fault of their own have been unable to save. It is a challenge to the richest and most prosperous country in the world -a challenge to our intelligence and our love of mankind.-Christian Herald.

FOOD AND DIET IN RELATION TO HEALTH

By
THOMAS A. MANN, M. D.
(Radio Talk)

Food and diet play a more important part in their influence on good health and long living than any other

factor of our environment. A good comparison can be made between the automobile and the human machine.

If we run an automobile without the proper lubricants, it quickly begins to wear. If we continue to run it without them, it soon wears beyond repair. If we try to run it without cylinder oil, a bearing goes out in short order; and without gas, ceases to move. With the human machine food has the same relationship as gasoline, cylinder oil, and lubricants have to the automobile. There are certain elements that must be supplied for the human machine every minute, oxygen for example; others every day, and others less often; but nevertheless they are necessary. If we do not get every food essential, we may go for a time, perhaps, without knowing that thing is wrong; but if we fail to put in the proper mixture, a break in the human organism is inevitable. If we continue long enough with an inadequate and unbalanced diet, the break becomes irreparable.

The functions of food are:

- 1. To supply waste and build new tissue.
- 2. To furnish heat and energy.
- 3. To promote growth and repair of tissue.

Three different types of food supply the building material, the heat, and the energy. These are proteids, fats, and carbohydrates and known as organic foods. Besides these we must have inorganic salts, such as calcium, iron, phosphorus, iodine, etc. We also must have vitamins. These are very important, as will be shown later. A lack of them is responsible for many of the deficiency diseases. A balanced diet is one that contains the above constituents in proper proportions. The amount food needed daily depends, of course, upon the work done. The football players of the country will consume many calories tonight after strenuous game.

The standard by which we measure the energy value of food is the calory or heat unit. It is not necessary to understand all about calories order to select a diet with the proper Physiologists caloric value. found the daily caloric needs for the human system. Chemists have found the caloric value of different foods. Tables showing the proteid, fat, and carbohydrate value in calories of portions of food as ordinarily eaten are available. The daily caloric requirement in proteids, fats, and carbohydrates per pound of body weight is also known. With this information at hand, a little arithmetic will enable us to solve the problem of the amount of food needed daily to supply these demands. We have not time to give details in this talk.

The inorganic salts, such as calcium, iron, and phosphorus, are found both in animal and vegetable foods. Tables showing the caloric value of foods and foods containing various mineral salts will be supplied by the State Board of Health upon request. We have time now to mention only a few foods containing these minerals.

Calcium—Milk is our most important calcium food. One glass contains a third of our daily requirements. Cheese, beans, oranges, figs, fish, and eggs also supply calcium.

Phosphorus — Fish, beef, beans, milk, peanuts, and eggs are good phosphorus foods.

Iron—Beef, spinach, beans, white potatoes, and fish are good sources for iron.

While calcium, iron, and phosphorus are the only mineral salts mentioned, other mineral requirements are supplied in a balanced diet containing these three. One mineral element—iodine—is found in sea foods. People who live in goiter districts should eat an abundance of sea foods, since simple goiter is due to a deficiency of this salt.

The Vitamins

Vitamins are accessory food substances which are necessary for normal nutrition in both lower animals and men. They do not furnish energy, but supply certain substances that are necessary for tissue growth. Very little is yet known of their chemical nature. Much of what is known of them has been elicited through the observations on animals that have been deprived of the special factor studied. At the present time six vitamins have been classified; namely, A, B, C, D, E, and G. The particular disease due to a deficient supply or lack of each vitamin is known.

Vitamin A is called the opthalmic vitamin, because, when deficient or lacking, an eye disease known as xeropthalmia develops. Vitamin A also promotes growth and brings about a resistance to infection. Vitamin A is found in butter, egg yolk, cod liver oil, and the fats of liver and kidney.

Vitamin D is found associated largely with vitamin A. Vitamin D influences the formation of bone by its action on calcium and phosphorus. Formerly we thought rickets caused by lack of vitamin A. We now know that vitamin D is the controlling factor in this disease. Vitamin D is found in butter, cod liver oil, and most green vegetables. Cod liver oil is the best natural source, but it can be produced in pure form by irradiating ergosterol. Most cod liver oil now has vitamin D added, which makes it a more valuable product. Vitamin D in viosterol is sometimes called bottled sunshine, since sunshine on the body has the same effect as vitamin D when given artificially. The custom of exposing the body to the sun is a good one.

Vitamin B is water soluble and is not associated with fats and oils. It is distributed in natural foods and is abundant in yeast, eggs, most meats, and especially the glandular organs like liver and kidney. It is found in vegetables, as potatoes, spinach, carrots, and turnips, and in grains. Vitamin B is removed from grain in the milling; hence the disease known as beri-beri, which in Asia was found to

be due to a diet of polished rice. Yeast is rich in vitamin B.

Vitamin C is the antiscorbutic vitamin. It prevents scurvy. Oranges, lemons, tomatoes, lettuce, and raw cabbage are excellent sources of this vitamin. Heat, especially in the presence of oxygen, destroys it; hence the wise custom of giving infants orange juice or tomato juice to insure an adequate supply of vitamin C.

Vitamin E is the reproductive factor. Feeding experiments on small animals show that when this factor is taken from them they cease to propagate. Vitamin E, however, is present in most foods. Lettuce and wheat germs are especially rich in it. There is no shortage of vitamin E in an ordinary mixed diet containing vegetables.

Vitamin G. Vitamin G is the antipellagra factor. It is present in most foods that contain vitamin B. Whole wheat, however, which has B, has almost no G. Fresh milk, fresh meat, and fresh vegetables have more G than B. Yeast has both B and G. To prevent pellagra, it takes a generous supply of meat, milk, eggs, and fresh vegetables. A balanced diet of energy food so selected as to supply abundant vitamins is very important for the expectant mother. It will assure good teeth for her offspring and prevent decay in her own teeth.

We have spoken so far of the composition of foods. A brief discussion of their preparation is now in order. We cook foods to render them more digestible, and to protect them from disease transmission. It is not always possible to tell by the eye when a food is safe or is contaminated. Milk, which is one of our most valuable foods from a nutritional standpoint, may be sweet, and apparently of the highest quality, but at the same time it may be contaminated by disease producing bacteria. For this reason students of preventive medicine and public health officials are

unanimous in their advocacy of pasteurized milk supplies.

The claim that heating the milk changes the vitamin value does not outweigh the safety factor brought about by proper pasteurization. We must look to other sources for vitamins that are destroyed by the heating of the milk. Animal foods should be cooked. Meats should be cooked not only to render them more digestible, but to render them safe. Cysticercus, the larva of the tape worm, is found in beef and pork. Unless cooked, there is danger of transmitting the cyst to man. In cooking vegetables, care should be taken to save the mineral salts. The new plan of waterless cooking is a good one. Any water extract left after cooking vegetables should be consumed. In other words, should drink the pot liquor.

Many vegetables can be eaten raw, but we must be sure that they are clean and safe. Raw cabbage, carrots, turnips, and sweet potatoes can safely be eaten raw. If raw turnips and raw sweet potatoes were as dangerous as some would lead us to believe, many a country boy and girl would be in danger. Grated sweet potatoes and grated carrots, finely chopped cabbage, and lettuce flavored with pineapple or other fruit make an excellent salad, and furnish an abundant supply of vitamins.

After food has been properly prepared for the table, it should then be properly prepared for digestion by slow, thorough chewing and mixing with the secretions of the mouth. Do not wash unchewed food down with water. A reasonable amount of fluid with the meals is all right, but it should be used properly.

This reminds me to speak of the water supply. Be sure that it is safe and unpolluted. Our bodies are very largely composed of water, about 60 per cent of our body weight. The average adult needs from three to five pints daily. There is not much danger of drinking too much water, provided one does not try to drink it all at mealtime. If your water is from one of the city supplies in North Carolina, you are fortunate, for this State has very fine water supplies. If your supply is from a well, be sure that the well is sealed at the top, and that the water is drawn through a pump. Every open bucket well is a potential danger, it matters not how fine the water may be chemically.

The object of this talk has not been to give in detail instructions in selecting an individual meal, but to arouse interest in the subject of selecting and preparing a balanced dietary.

The climatic conditions in North Carolina are such that any one who has space for planting can have a fine garden. If the people of the State would raise more vegetables, more chickens, eggs and fruits, more milk for home consumption, it would not be many years before pellagra and all other deficiency diseases would be a thing of the past.

DO NOT FORGET THAT TOXINANTITOXIN WILL PROTECT CHILDREN FROM DIPHTHERIA

SOME CLASSIC ALLUSIONS TO MILK

By JAMES A. TOBEY, Dr. P. H. New York City, New York

"Honey and milk are under thy tongue," sang the son of David three thousand years ago. This reference in the Song of Solomon (4:11) is but one of about fifty such lyrical allusions in the Bible to the which is the most valuable of many possessed by man. Mention of milk occurs often in ancient literature, with much that is interesting and inspiring to those persons of the present who seek to foster a greater public appreciation of this important food. When the people "is hungry and weary and thirsty in the wilderness," they shall have for sustenance "honey, and butter, and sheep and cheese of kine," says the Book of Books (2 Samuel 17:29).

Whenever the ancient Hebrews wished to extol the virtues of a particular locality, they characterized it as "a land which floweth with milk and honey." There are a score of such references in the Bible, contributed by many different writers. One enthusiast of the period promised that "the hills shall flow with milk (Joel 3:18), while another threatened, "I will deliver thee to the men of the eastthey shall eat thy fruit and they shall drink thy milk (Ezekiel 25:4). Shakespeare also couples milk with its nectareous companion when he pleads in his Love's Labour Lost (v. 2-231) for, "one sweet word with thee, honey, and milk, and sugar." Another bard, Coleridge, tells us in his Kubla Khan

that "he on honey dew hath fed, and drunk the milk of Paradise."

This Kubla, or Kublai, Khan was indeed one who imbibed frequently of milk, for Marco Polo, most celebrated of world travelers, who sojourned at the khan's court, has related that this potentate maintained large herds of white mares for the sole purpose of supplying milk to assuage his august appetite and to provide for his family. No doubt this sustenance aided the great Mongol ruler in his conquest of China in the thirteenth century. The Chinese have never had the advantage of many dairy products and, besides, the Mongols were customed to sprinkle the native soured milk, Koumiss, on their battle flags before engaging in combat. This libation to the Mongolian Mars have been of a propitious nature.

Old Marco Millions, who had a keen eye for novelties, brought back from the East a description of a dried milk made by his Mongolian friends, the first product of this nature on record, and he also sampled the intoxicating soured milk of the Tartars. Once a year the Mongols held a ceremony in which the milk of a white mare was scattered upon the ground and to the winds, so that the Earth and Air and the False Gods should each have their portion of the most valuable offering of man to his gods.

The propitiation of pagan deities

^{*&}quot;Dr. Tobey is co-author with Dr. Samuel J. Crumbine of a new book on milk entitled "The Most Nearly Perfect Food," published by the Williams & Wilkins Company of Baltimore, Maryland. This article was prepared to furnish interesting historical material to nurses addressing children or mothers on food topics."

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with milk was also a Roman custom, for the East and the West were one when it came to an appreciation of milk. Romulus, foster-child of the she-wolf, and founder of Rome, poured a libation of white milk to Jupiter, who could appreciate the gift, for he had been suckled by the she-goat on his island refuge where the Sea Kings of Crete reared the stately palace of Broad Knossos. In this palace of two thousand years before Christ, vases decorated with cows have been uncovered. The ceremonies in honor of Jupiter, with their libations of milk, were continued for eight centuries after the founding of Rome, according to Pliny the Elder, noted naturalist of the first century. Pliny was an advocate of milk himself and wrote one or two treatises on the subject.

"One uses milk," says Professor Pliny, who though not exactly a physician, never hesitated to write on medical topics, "as a beverage in all internal ulcerations, especially those of the kidneys, of the blood vessels, of the intestines, of the throat and of the lungs; and externally for itchiness of the skin, for fever blisters after having been put on a regime for a short while." Speaking of the external use of milk, the Empress Poppaea, wife of Domitius Nero, had 500 asses to supply her with milk for a daily bath of cosmetic quality.

Milk was also advocated by all the ancient healers for the treatment and cure of consumption, the disease called phthisis by the Greeks. Hippocrates, the father of medicine, advised milk for all light fevers, but for some eccentric reason he did not particularly favor it for persons "that are thirsty." These ancients were not always so archaic in their ideas, for milk is, of course, one of the modern mainstays in the treatment of tuberculosis and many other maladies.

The great Greek doctor, Aretacus, was even more enthusiastic in his praise of milk. "To take milk," he said, "is pleasant; to drink it is easy;

it contains solid nutrition and it is of all foods the one with which one is most familiar from childhood; it is even most pleasant to the sight on account of its whiteness." He then goes on to describe its medicinal value and concludes, "If a person drinks much of this he needs no other nutriment; and it is indeed well that milk is both food and medicine in ill health; as a matter of fact, there are nations who live on milk and who are called 'Galactophagi' and who never eat any grain whatsoever."

Other famous writers of old have mentioned these milk-drinking ples. Strabo, a Greek explorer and geographer, stated that milk was the principal subsistence of the Ethiopians and the Lusitanians, while Homer called a Scythian tribe "mare milkers" and also related that neither milk nor cheese was lacking in Libya throughout the year. In the Iliad, Homer tells us that the Achaeans resembled the swarms of flies about milk vessels in the springtime. doubt the eminent minstrel sought to smite those flies as he smote his inestimable lyre, for sanitation in days of the siege of Troy apparently left something to be desired. It may have been better in Shakespeare's time for in Two Gentlemen of Verona (VII, 1-277), the immortal poet says, "She can milk; look you, a sweet virtue in a maid with clean hands."

Classical authors whose names are familiar today many centuries after they lived have contributed to the literature on milk. Herodotus wrote about it, and so did Plutarch, who also praised cheese. Virgil and Caesar each told about dairying, and Josephus, the contemporary of Christ, revealed in one of his historical books that "Abel brought milk and the first fruits of his flock as offerings." Galen, one of the most notable figures in medical history, was a staunch liever in milk, which, he averred, "repeatedly has been set down by all physicians as of the best nutritive value."

In one of his books Galen described a man who lived to be more than one hundred years old on a milk diet.

Long since Galen's era, longevity has frequently been attributed to milk diets. The late Professor Eli Metchnikoff cited the cases of Marie Priou, who died in 1838 at the reputed age of 158 after living most of her life on cheese and goat's milk, and Nicole Marco, who survived to mature age of 110 on a diet of bread and cheese. That there may be something scientific in such phenomona has been indicated recently by the investigations of Professor Henry C. Sherman at Columbia University in New York, who has demonstrated by experiments on more than 21 generations of white rats, including some 400 of these supple rodents, that an increase in the proportion of milk in an already adequate diet results in a ten per cent increment in the span of life. The chance of error in his studies have been computed to be only one in ten thousand and his work presents remarkable evidence of the possible influence of diet on longevity, with pure milk playing a leading role.

The ancients appreciated the significance of milk in human affairs, for practically all peoples of the early civilizations worshipped the cow as a goddess. To the Babylonians she was the mother of the Moon, while Egypt she was the deity called Hathor, who produced the fertility of the land and caused the Nile to overflow at regular intervals. In the Vedic songs of India, as venerable as the Old Testament, the cow was declared to be man's chief benefactor. These ancient hymns declare that milk and dairy products are the most valuable of all offerings to the gods.

The oldest of all references to milk was discovered in Mesopotamia a few years ago by members of the joint expedition of the University of Pennsylvania and the British Museum, working under the direction of Mr. C. Leonard Wooley. At Ur in the Chal-

dees these archeologists uncovered a milk scene which is at least five thousand years old. It was constructed by a king of the first dynasty with the alliterative cognomen, A-an-ni-pad-da, who used the scene to decorate a temple on a mound at Tel Al Ubiad, four miles from his capital at Ur.

On the facade of this shrine the king placed a continuous frieze cut in limestone, which depicted an interesting view of pastoral life as it existed among the ancient Sumerians. In the center was a byre, or cow-stable, made of reeds bound with rope, with the door-way flanked by spears and surmounted by a crescent. Two heifers are emerging from this doorway, and two cows, each accompanied by calf, are already outside. The cows are being milked by men seated directly beneath their tails, and calves are muzzled so that they cannot interfere with this lacteal production.

The other side of the doorway is occupied by four dairymen. One has his hand in a large jar, the next is pouring milk from a small jug into a strainer held by his colleague, while the fourth straddles another large container. The whole operation obviously depicts an interesting dairy process, such as the making of butter, or the collection and storing of milk. The nearest approach to it from the standpoint of antiquity are the bones of cattle and goats, and the remains of dairy implements found at the site of the homes of the lake dwellers of Switzerland, who resided there from 4,000 to 2,000 years before Christ.

Modern appreciation of milk is as great as that of the ancients. The peoples of the past had experience to give them cause for their admiration of milk, but we have experience plus scientific research, which has produced for us logical and incontrovertible reasons why milk is the most valuable of all human foods, the one article of the diet for which there is no single

substitute. And so we can sing with Pindar, poet laureate of the golden age of Greece:

"Rejoice, my friend! Lo, I send you, though at late hour, this honey mixed with white milk, fringed with the froth of blending, a draught of song conveyed in the breathings of Acolian flutes."—The Trained Nurse and Hospital Review.

"VITAMINS MAY BE VIBRATIONS IN THE ETHER"

A few months ago Sir James Barrs, an English physician, made an interesting speech at a British medical society meeting. We quote two paragraphs:

First. "I am more concerned with the preservation and efficiency of health than the mere prolongation of life; a sound mind in a sound body, the former can scarcely exist without the latter. When I travel outside the beaten paths of traditional medicine I do not wish you to accept anything which I may say until you have proved it for yourselves. The only knowledge worth a tinker's imprecation is that which you acquire for yourselves and make your own. Prove all things, hold fast to that which is good. Accept facts and not mere opinions, no matter by whom uttered.

Second. It is easy to know all that is known about vitamins, and if you acknowledge not to know your patients may think you very ignorant, and much behind the times. You can buy vitamins by the ton at a very substantial price, yet no chemist, nor even a bio-chemist, has been able to discover their chemical composition; the nearest approach is that when some of the sterol compounds such as ergosterol are exposed to the mercury vapor lamp they become charged with vitamin D and you must be careful not to overcharge lest the stuff become poisonous. It may thus turn out that vitamins are vibrations in the ether of definite wave lengths, and a bio-physicist may eventually be able to measure the wave length and determine the dosage."

In the meantime good advice to Bulletin readers (and that is not opin-

ion either) is to continue to raise your own vitamins and fats, proteins, carbohydrates, sugars, calcium, etc.) wherever possible and where you can't raise them yourselves, your grocer, dairyman, and produce dealer has them. Fruit, vegetables, cereals, fresh meats and milk, butter and eggs. You can thus extend a welcome to the vitamins and say goodbye to pellagra and pessimism.

RECOMMEND GROUP HEARING APPARATUS

Persons with seriously impaired hearing should employ a hearing aid, Dr. Wendell C. Phillips advises in an article in Hygeia for December. It must always be understood, however, that even the best hearing devices are simply aids to hearing and do not improve the actual hearing function.

Deafened persons are especially warned not to be misled by any form of newspaper or magazine advertising setting forth claims to cure deafness. For ages hard of hearing persons have been exploited by fakers.

In recent times electrical engineers have developed not only individual hearing devices, but of late the group hearing aid has come into existence, whereby it is possible for large groups of the hard of hearing to receive the benefits enjoyed by hearing persons. The group hearing aid is here to stay, Dr. Phillips points out, and hard of hearing persons in every community should demand church authorities, managers of theaters and concert halls should install this hearing apparatus which scientists have selected and developed .-Hygeia.











